CEPHEUS DELUXE

Science Fiction Role-Playing Game

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STELLAGAMA PUBLISHING

2D6 OGL SCI-FI

CEPHEUS ENGINE — COMPATIBLE —

CEPHEUS DELUXE

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CEPHEUS DELUXE ENHANCED EDITION

INTRODUCTION

Starships riding fire across the sky. Heroes and villains exchanging laser fire. Desperate spacers struggling against an alien monstrosity. Vast planetary vistas, flying cities, moonscapes, mad robots, and first encounters. In short: high-action science-fiction adventure that stimulates your sense of wonder. Cepheus Deluxe puts you in the shoes of an adventurer visiting distant stars and encountering the unknown. Whether you are a seasoned player looking for a rules-light game, or a new gamer wanting to experience what science-fiction role-playing games are all about, Cepheus Deluxe opens your way forward.

The future awaits!

WHAT IS A ROLE-PLAYING GAME?

A role-playing game (RPG) is a game where the players assume the roles of characters in a fictional setting. Players act out these roles within a narrative, either through literal acting or through a process of structured decision-making based on rules. These rules allow fair and dramatic resolution of uncertain or dangerous situations that the players' characters face.

Cepheus Deluxe requires imagination, inspiration, and discussion. Two or more players can play, though typical groups range between 3-5 players. All you need to play is this document, a few six-sided dice, and writing supplies. One player, the Referee, "plays" as the game world and describes the fictional situation, while the rest of the players each play one Player Character who acts freely within this world and deals with the consequences of their actions. Together, the Referee and players create a story, much like the way many of us used to create stories by playing make believe as young children, except with more dice and more structure.

WHAT IS CEPHEUS DELUXE?

Cepheus Deluxe is a set of rules for playing classic science fiction games. It includes rules on creating characters, resolving actions, fighting other creatures, and engaging in space battles, generating worlds, handling the risks of interstellar speculative trading, exploring new worlds, and many other activities. While rules-light and designed for fast, action-packed play rather than an accurate simulation of reality, Cepheus Deluxe encompasses a wide variety of rules and materials for building a science-fiction universe and playing in it.

Cepheus Deluxe draws its inspiration from old-school science-fiction roleplaying games. It shares many similarities with these games. Material from older rules sets and those created with Cepheus Deluxe, the old Cepheus Light, the Cepheus Engine Core, and old-school sci-fi roleplaying games, are easily compatible with only a moderate amount of adjustment.

To play, you need a copy of these rules; several six-sided dice, available at game and teacher supply stores (you will need at least two, but more is better); you will also need a pencil and some paper.

WHAT IS NEW IN CEPHEUS DELUXE COMPARED TO CEPHEUS LIGHT

- Skill throws are now modified by Characteristic DMs (modifiers), as in the Cepheus Engine SRD/Core. This means that target numbers are somewhat higher. This also means better compatibility with the Cepheus Engine SRD/Core.
- UPP and UWP pseudo-hexadecimal digit strings are now completely optional.
- Character generation is now less random and more controlled by the players. Randomness is retained by rolling on Event and Benefit tables, but most of the other elements of character generation permit greater player control.
- There is no more death in character generation, unless you use an optional rule, but serious injury (requiring cybernetic replacement) is very possible. So is spending some time in prison!
- Damage no longer directly modifies Characteristics and is applied against Stamina and Lifeblood scores. These are based on the character's Endurance and Athletics skill.
- Character Traits are now included in the core book.
- Cybernetics have been expanded, clarified, and systemized - and mostly moved to TL9 for the benefit of low-tech cyberpunk games! They are also cheaper.
- Cepheus Deluxe offers detailed, yet lightweight, robot design rules.
- We have presented Vehicle data in a much more readable format.
- Vehicle-scale weapons are now more detailed, for more vehicle customization and combat.
- Characters can now suffer a Mortal Wound in lieu of dying in some cases. Prompt Trauma Surgery might save them.

- Death is no longer final at high tech levels! Cyborg Conversion and Bio-Reconstruction permit you to cheat death, albeit at a high price and with complications.
- Vehicle and starship armor uses a simpler system of a simple weapon class vs. armor type table rather than the old Penetration dice, which were difficult to balance.
- "Advantage" in vehicle and starship combat was renamed "Position" to avoid confusion with the Trait-related Advantage mechanic.
- Psionics are now an integral chapter rather than an appendix and are expanded.
- Trade now takes into consideration the world's traffic and travel danger, making goods cheaper on safe, high-traffic core worlds, and expensive on dangerous, low-traffic backwaters. So, if you want to make a profit as a small trader, you should try your luck selling goods to the dangerous Frontier!
- Starship hulls can now reach 10,000 tons rather than 5,000 tons.
- Starship drives were completely revamped and are now calculated as a percentage of the ship's tonnage. Jump potential, rather than ship size, is also limited by tech level.
- Power plants no longer use external fuel. Annual refueling during maintenance keeps your fusion plant running for at least a year. Fuel is for jumps only.
- There are now more varied starship weapons, including Main Guns such as spinal weapons to crack that 10,000dton Massively Armored behemoth!
- TL16 now permits force shields, both for personnel and starships!
- We have redesigned the starship random encounter chapter.
- There is now a Referee's Advice chapter at the back of the book.
- We provide an Optional Rules appendix – with many interesting optional rules, including armor as a modifier to hit!

RULE ZERO

To facilitate play, the Referee is the final arbiter for any game-related question.

A NOTE ABOUT USABILITY

We strived to make Cepheus Deluxe's as compatible with the First Edition of the game as possible. There are numerous changes, but they will not invalidate existing books and materials based on the old Cepheus Light.

All material included in this book, except for the above introduction chapter, the Referee Advice chapter, and Appendices B and C, is Open Content. This means that the book, with the above-noted exceptions, can serve as a basis of your rules and products (including commercial ones!), and even re-published.

As noted above, the names "Cepheus Deluxe", "Cepheus Light", and the "Cepheus Engine", however, are trademarks owned by Jason "Flynn" Kemp and Samardan Press™ and using them is subject to consent from Jason "Flynn" Kemp and Samardan Press™. Claiming compatibility with the Cepheus Engine follows the Cepheus Engine Compatibility-Statement License, as given in the Cepheus Engine System Reference Document published by Samardan Press™.

ABOUT THE AUTHORS

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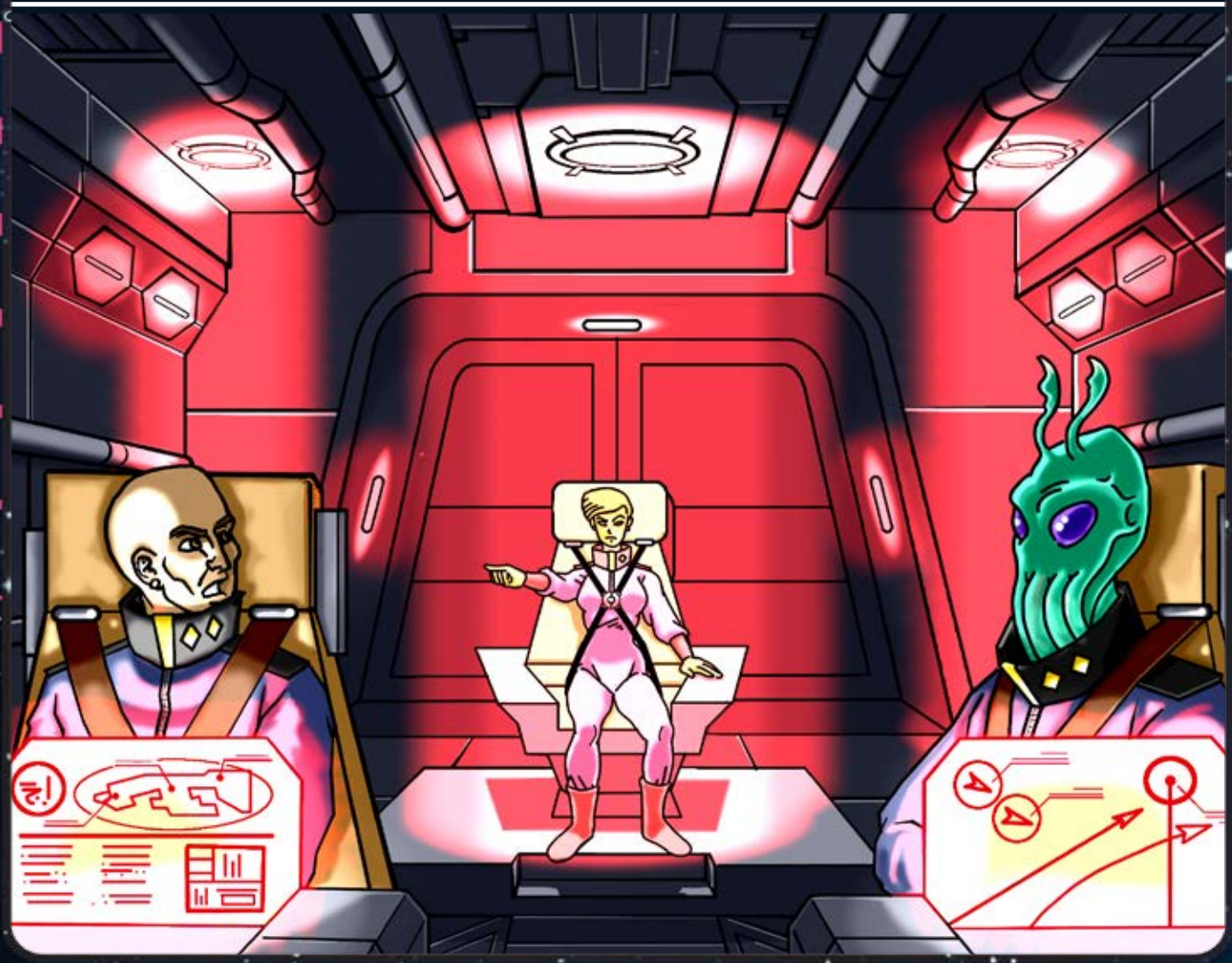
Robert L. S. Weaver is a college librarian, who has played science fiction and fantasy RPGs since the early 1980's. He has published a few science fiction stories, although none are currently in print.

STELLAGAMA PUBLISHING

Stellagama Publishing is an international role-playing game publisher focused on science fiction and sword & sorcery gaming, founded in January 2016. We publish gaming material for the *Cepheus Engine*, 2D6 Sci-Fi OGL, Stars Without Number, and White Star RPGs. Our goals are primarily to publish enjoyable and immediately playable supplements, settings, rulesets, and adventures for our fellow players and referees. Our flagship setting is **Terra Arisen!** a high-action space-

opera universe in which Terra only recently gained its freedom from the mighty Reticulan Empire. Our flagship ruleset is **Cepheus Deluxe**, an old-school 2D6 sci-fi role-playing game. We also published a sword & sorcery 2D6 ruleset, **Sword of Cepheus**, in 2020, and a lighter sword & sorcery ruleset, **Barbaric!**, in 2021, which opened the way for the lightweight and versatile *Quantum Engine*.



BASIC RULES

DIE ROLL CONVENTIONS

Cepheus Deluxe uses common six-sided dice. We note each die you need to roll as a "D". Unless noted otherwise, "2D", for example, means "roll two dice and add the results together".

In this game, DM means Dice Modifier – a number you add or subtract from a dice roll. For example, "2D, DM-2" means "roll two dice, add the results together, and then subtract 2 from the total".

Another die roll type is "D66". In that case, throw two six-sided dice, but do not add the results together. Instead, use one die as the "tens" and the other as the "ones", providing 36 results.

THE BASIC GAME MECHANIC

The basic mechanic of Cepheus Deluxe is the throw, and when we say this, we mean dice throw. Throw 2D, add the relevant skill and characteristic DMs, and if the total is equal or higher than the target number, you succeed. For example, "throw Athletics/STR 8+" means "throw 2D and add your Athletics skill level and Strength Dice Modifiers; if the total is 8 or more, you succeed" The amount by which your total throw exceeds or misses the target number is called the Effect. If, using the previous example, you roll a total of 11 on that throw, your Effect is 11 – 8 = 3; alternately, if you throw a 4, your Effect is 4 – 8 = -4.

If a task is even remotely possible, a natural (unmodified) roll of 2 is always a failure, while a natural (unmodified) roll of 12 is always a success. This is regardless of target numbers or further circumstances.

Opposed throws: in a situation where two characters oppose each other in an attempt, for example, a spy trying to sneak past a guard, each character throws 2D plus the appropriate skill and characteristic modifier; the higher roll wins. On a tie, the character with the higher total DM to the throw (from skill, characteristics, etc.) wins. If both characters are equally competent, reroll the tie.

Unskilled characters: if a character attempts a throw with a skill they do not possess, they suffer DM-3 to that throw.

Trying Again: generally, you may retry failed skill or characteristic throws. However, in some cases failure has consequences: failing a Demolitions throw might mean having a bomb explode in your face. This instance precludes the possibility of second chances.

Note that skilled characters are competent and can usually practice their trade or profession, under normal conditions, without a throw. Use throws only when the characters are at serious risk or under pressure, such as time pressure, opposition, or adverse conditions. For example, a physician (Medicine 3) can give effective first aid without requiring a throw and can help characters recover from serious wounds but would have to make a Medicine throw to treat a genetically engineered disease.

COLLABORATION

In some cases, characters may work together on a task throw. The character with the highest skill and characteristic makes the main skill throw. Any assistant can make a skill throw at the same difficulty as well; if they succeed, add DM+1 to the primary character's throw; if they fail, the primary character suffers no penalty. There can only be one assistant to the main skill throw. However, the Referee is encouraged to allow other characters to assist the assistant. Each throw has the same difficulty as the original skill throw. Note that characters who are assisting in the throw do not necessarily have to use the same skill. If the player and Referee agree, a related skill task throw can assist. For example, a ship's engineer might throw Engineering to assist the Pilot's skill throw. Teamwork!

EXAMPLES OF COMMON TARGET NUMBERS

DIFFICULTY	TARGET NUMBER	EXAMPLES
Easy	6+	Repairing a damaged vehicle system in a properly equipped workshop
Average	8+	Shooting a target in Effective range
Difficult	10+	Shooting a target beyond Effective range
Formidable	12+	Landing a ship in a hurricane with a damaged engine, under enemy fire
Impossible	14+	Anything that the Referee would find amusing

COMMON TARGET NUMBERS

The prior table provides guidelines for Referees to set Target Numbers. Any Target Number below 4+ is probably not worth calling for a throw.

ADVANTAGE

In certain advantageous situations, specifically related to Traits and cybernetics, the rules may grant you an Advantage. In this case, throw 3D, and choose the 2 highest die results.

OPTIONAL RULE: HERO POINTS

The Cepheus Deluxe rules present a universe of gritty heroism: heroes can be powerful, but they are still human and constrained by this harsh reality. However, if you desire larger-than-life science-fiction heroes, use the following rule.

Each player starts each game session with 2 personal Hero Points. The group also has an additional number of Hero Points equal to the number of players present that session.

Each time a player fails in a skill or characteristic throw of at least 8+ with an Effect of 6 or more, the group Hero Point pool increases by 1.

Each time a player succeeds in a skill or characteristic throw of at least 8+ with an Effect of 6 or more, their own Hero Point pool increases by 1.

All pools reset at the beginning of each session.

A character may use their personal Hero Points, and with the other players' agreement, points from the group pool.

By spending Hero Points, a character may:

- Reroll any single die throw, including damage throws and vehicle or ship damage and critical hits. They may pick the better result.
- Force the Referee to reroll a single NPC's die throw, including damage throws and vehicle or ship damage and critical hits. The second result stands, so watch out!
- Reroll a throw on the Trauma Surgery, Cyborg Conversion, or Bio-Reconstruction tables. They may take the better result.

OPTIONAL RULE: ONLY INDIVIDUAL HERO POINTS

For a more modest Hero Point system, ignore the Group Hero Point Pool and only grant Individual Hero Points.

EXAMPLES OF SKILL LEVEL EXPERTISE

SKILL LEVEL	EXPERTISE	MEDICINE	GUN COMBAT
0	Basic training	First aid training	Basic firearm training
1	Employable	Paramedic	Trained soldier or cop
2	Professional	Physician or experienced nurse	Platoon sharpshooter
3	Experienced professional	Experienced physician	Certified sniper
4	Expert	Specialist physician	Corporate SWAT sniper
5	World-class expert	Cutting-edge surgeon	Olympic shooter

CHARACTER GENERATION

SKILLS

Characters in Cepheus Deluxe use a variety of skills to confront the challenges awaiting them among the stars, from piloting a starship to shooting a laser.

Skills are a character's greatest asset. Skilled characters are competent. A Skill at level 1 (denoted "Skill 1") represents someone who is employable; Skill 3 denotes a trusted professional; and Skill 5 represents a world-class expert. For example, a newly trained paramedic has Medicine 1; an experienced physician has Medicine 3; and a cutting-edge cyber-surgeon, skilled beyond the typical physician, has Medicine 5. The task resolution system takes this into account – professionals should automatically succeed at routine tasks (difficulty 6+) and easily perform average tasks (difficulty 8+), while experts will automatically succeed in routine and average tasks and easily manage difficult (10+) ones.

NOTE ON CEPHEUS ENGINE CORE AND SYSTEM REFERENCE DOCUMENT

Cepheus Deluxe skills are somewhat different than those found in the Cepheus Engine Core rules but are easily compatible. Most notably, Repair is the combination of Electronics and Mechanics; Admin subsumes the Advocate skill; Carousing subsumes the Gambling skill.

ZERO-LEVEL SKILLS

Normally, a character is either skilled in a task or unskilled. In the latter case, they suffer DM-3 for lacking the appropriate skill. However, to facilitate play, we recommend that the Referee grant a few skills as "Zero-level" to each character at the start of the game. This means that while the character is not skilled enough to hold down a job with that skill, and does not enjoy a positive DM on rolls, the character is familiar enough with that skill to avoid the unskilled penalty (DM-3). The recommended Zero-level Skills for all adventurers are shown in the table below.

SKILL LIST

The skills included below are comprehensive, though there can be overlaps between two or more skills, depending on the context of the skill use in question, the players, and the Referee. We advise a certain amount of flexibility to keep the game moving.

Admin: understanding and dealing with bureaucracies, businesses, and the law. Also covers forgery.

Examples: throw Admin/EDU 10+ to deal with a complex government bureaucracy and get permits. Throw Admin/INT opposed by Investigate/INT to pass off forged documents as authentic. Throw Admin/INT or Admin/SOC 10+ to bluff your way past a routine customs inspection.

Aircraft: controlling and using atmospheric aircraft. This skill covers navigation and basic maintenance, but not repairing damage.

Examples: throw Aircraft/DEX 8+ to safely land an airplane in stormy weather without automatic guidance. Throw Aircraft/EDU 8+ to plot out a long flight path that maximizes fuel efficiency.

Animals: the care and training of animals. Also covers riding and general agriculture.

Examples: throw Animals/DEX 8+ to avoid falling from a mount when the animal suffers a wound. Throw Animals/EDU 6+ to care for and feed farm animals.

Athletics: the ability to exert oneself physically. You may add the Athletics skill to appropriate physical characteristic rolls. This skill is never rolled unskilled.

Examples: throw Athletics/END 6+ to swim against a powerful current. To move past obstacles while running, using Parkour-style moves, throw Athletics/DEX 8+. To climb a rope quickly, throw Athletics/STR 8+.

Carousing: the art of mingling in social settings to achieve your goals. Also covers gambling.

Examples: throw Carousing/SOC 6+ to gather useful rumors at a party. Throw opposed Carousing/END to drink someone under the table.

Computer: programming, working with computer hardware, and hacking. This skill also covers the use of sensors and communications gear.

Examples: throw Computer/EDU 8+ to purge malware from a computer. Throw Computer/EDU 12+ to hack a government server and download a database. Throw Opposed Computer/EDU to avoid detection and tracing while doing so.

Deception: convincingly avoiding the truth and misleading other people. This skill covers sleight-of-hand and disguise as well.

Examples: throw Deception/SOC 10+ to lie your way past a corporate sentry while posing as a visiting executive. Throw Deception/INT opposed by Investigation/INT to lie during a police interrogation and not be found out. Throw Deception/END 12+ to fool a polygraph lie detector test. Throw Deception/DEX 10+ to palm a small item (can be opposed by Recon or Investigation).

Demolitions: working with explosives to blow stuff up! This skill also covers defusing said explosives before they blow up!

Examples: throw Demolitions/INT 8+ to defuse a bomb of average complexity. Substitute DEX if the bomb is on a timer and is about to explode imminently. An Effect of -4 or worse will cause an accidental detonation. Throw Demolitions/EDU 10+ to demolish a bridge using the bare minimum of explosives. Throw Demolitions/INT 8+ to construct and plant homemade fragmentation mines on a defensive perimeter.

Driving: controlling and using ground vehicles. This skill covers navigation, as well as basic maintenance, but not repairing damage.

Examples: throw Driving/DEX 8+ to jump over a raised drawbridge with a motorcycle. Throw Driving/EDU 8+ to navigate through a desert on a long-distance rally race. Throw Driving/DEX 10+ to pull a bootlegger turn and parallel park, all in one smooth motion.

Engineering: using and maintaining of starship drives, powerplants, and other systems specific to starships. Engineering is the required skill for Jump drive operation. This skill is not a substitute for the Repair skill (below).

Examples: throw Engineering/EDU 8+ to estimate a ship's performance and tonnage. throw Engineering/INT 10+ to jury-rig a damaged power plant. More Engineering skill actions are presented in the Space Combat and Starship Operations chapters.

Grav Vehicles: controlling and using gravitic vehicles. This skill also covers navigation and basic maintenance, but not repairing damage.

Examples: throw Grav Vehicle/DEX 8+ to fly a grav-disc through a severe thunderstorm. Throw Grav Vehicle/DEX 10+ to fly at nape-of-earth altitudes at supersonic speeds.

Gun Combat: using small arms, crossbows, and bows in combat.

Examples: throw Gun Combat/DEX 8+ to hit a target in Effective range with a handgun. Throw Gun combat/DEX 10+ to hit a target at Maximum range. See the Combat chapter for more information.

Gunnery: using vehicle-mounted or spaceship-mounted weapons.

Examples: throw Gunnery/INT 8+ to hit a target in space combat. See the Combat and Space combat chapters for more information.

Heavy Weapons: using plasma guns, rocket launchers, and other portable heavy weapons.

Examples: throw Heavy Weapons/DEX 8+ to hit a target in Effective range with a plasma gun. Throw Heavy Weapons/INT 10+ to hit a target at Maximum range with a guided missile launcher.

Investigation: keen observation, forensics, research, and detailed analysis.

Examples: throw Investigation/INT 6+ to locate and extract fingerprints from a crime scene. Throw Investigation/EDU 10+ (or opposed by someone's Admin/EDU) to uncover evidence of fraud or other irregularities in a business' accounting practices. Throw Investigation/INT 10+ to find hidden levers, or to notice that a crime scene was disturbed before being discovered. Throw Investigation/INT 8+ to perform surveillance on a target.

Jack o' Trades: this special skill reduces the unskilled penalty (DM-3, noted above) by its level. For example, a character with Jack o' Trades at level 2 would only suffer DM-1 to all unskilled rolls. You may not gain more than 3 levels in this skill and cannot improve it after character generation.

Leadership: motivating and directing others, often in times of crisis.

Examples: throw Leadership/INT 8+ to rally Shaken troops. See the Combat chapter for other uses of this skill.

Liaison: negotiation and diplomacy in a myriad of social situations. This skill covers diplomatic meetings, haggling in interstellar trading negotiations, or at the shouq, and talking down a gunman who is holding hostages.

Examples: throw Liaison/SOC 8+ to strike a deal with a reluctant alien merchant. Throw Liaison/INT 8+ to read a room and negotiate with the person who really makes the decisions. Throw Liaison/EDU 10+ to understand proper etiquette when dealing with an honor-based culture. Throw Liaison/INT opposed by Liaison/INT to haggle over a price.

Medicine: training in the medical sciences, from diagnosis and triage to surgery.

Examples: throw Medicine/DEX 8+ to perform Trauma Surgery (see the Combat chapter). Throw Medicine/EDU 8+ to diagnose a common, but serious disease. Throw Medicine/INT 10+ to notice that someone in a small crowd is seriously ill.

Melee Combat: fighting hand-to-hand, either with a weapon or unarmed.

Examples: throw Melee Combat/STR 8+ to hit a target with a sword. The Combat chapter has more detailed examples of how to use the Melee Combat skill.

Piloting: operating, controlling, and navigating interplanetary and interstellar space craft, both in real space and in jump space.

Examples: throw Piloting/EDU 8+ to plot a jump course. Throw Pilot/DEX 10+ to land on a hostile planetary surface with no landing pad. See the Starship Operations and Space Combat chapters for more details on the Pilot skill.

Recon: scouting for danger and spotting threats, including traps. Recon also covers performing forward observation for artillery.

Examples: throw Recon/INT 8+ to correctly identify the composition of a concealed enemy force. Throw Recon/INT 10+ to identify a likely ambush kill zone. Throw Recon/INT 10+ to call down an airstrike on a large stationary target, such as a building. Throw Recon/INT 8+ to track a target in the wilderness. Throw Recon/INT 12+ to locate a devilishly hidden trap.

Repair: the ability to maintain, repair and build mechanical and electronic devices of all sorts. This skill also covers lockpicking, both mechanical and

electronic. Ship-specific systems are handled by the Engineering skill, and Computers covers the use of electronic devices.

Examples: throw Repair/INT 6+ to repair a damaged vehicle at a workshop. Throw Repair/END 8+ to do the same repairs, but in one night. Throw Repair/EDU 8+ to restore a vehicle that is no longer functioning. For all these tasks, the character will need an ample supply of parts.

Science: the multidisciplinary scientific skill, as would be typical for a starship's science officer.

Examples: throw Science/EDU 8+ to identify rare minerals in an asteroid using the ship's sensors. Throw Science/EDU 10+ to predict how a new compound might react with human physiology. Throw Science/EDU 12+ to understand the effects of a jump-space anomaly on the gravitational quantum tachyon sensor array.

Stealth: the ability to be unseen and unheard, both while stationary and moving.

Examples: sneaking past a guard is an Opposed throw where the interloper throws Stealth/DEX while the guard throws Recon/INT, or Stealth/INT, whichever is better. Throw Stealth/DEX 8+ to hide from searchlights. Throw Stealth/END 8+ if the character has to hide and stay motionless for long periods. Bypassing more advanced sensors and security systems require specialized equipment and impose higher Target Numbers. Characters without Stealth or Recon roll to spot interlopers unskilled.

Steward: the care and serving of passengers and other guests. Steward skill adds to the throw for locating High Passage passengers. See the Starship Operations chapter.

Examples: throw Steward/INT 6+ to impress an upper-class passenger and gain a valuable bit of information. Throw Steward/EDU 8+ to know some basic information about the cultural mores of a given passenger to make them more comfortable. Throw Steward/DEX 6+ to mend clothing and groom the crew to a presentable level. Throw Steward/INT 8+ to cook a sumptuous meal.

Streetwise: familiarity with underworld society and the ways of working with it. The Streetwise skill adds to the throw for finding Low Passage passengers (see the Starship Operations chapter for more details).

Examples: throw Streetwise/STR 8+ to intimidate gang members. Throw Streetwise/EDU 6+ to understand criminal slang. Throw Streetwise/INT 8+ to locate a fence or fixer. Throw Streetwise/INT 8+ to shadow someone in an urban environment. Throw Opposed Streetwise/INT to lose a shadow. Throw Streetwise/SOC 10+ to arrange a meet with important criminals.

Survival: staying alive in the wilderness. This also covers "outdoor" skills such as tracking, foraging, navigation, and fishing.

Examples: throw Survival/INT 8+ to track your quarry through wilderness. Throw Survival/EDU 10+ to navigate through a steaming jungle. Throw Survival/EDU 8+ to determine just what sort of apex predator is hunting you.

Tactics: tactical planning and decision making, whether on the ground or in space.

Examples: throw Tactics/INT to determine Initiative in combat (see the Combat chapter). Throw Tactics/EDU 12+ to predict the enemy's battle plan using historical examples. Throw Tactics/INT 8+ to set up good firing positions for heavy weapons.

Watercraft: controlling and using watercraft, including submarines. This skill includes navigating these vehicles, as well as performing basic maintenance, but not repairs.

Examples: throw Watercraft/DEX 6+ to pilot a small motorboat through a storm without sinking. Throw Watercraft/DEX 12+ to sail a boat through a series of reefs and emerge unscathed, during a storm. Throw Watercraft/EDU 10+ to plot the circumnavigation of a planet.

Zero-G: working and living under microgravity conditions. Also covers the use of space suits and heavy armor. When characters are in combat in microgravity, they should use the lower of their combat or Zero-G skill.

Examples: throw Zero-G/DEX 6+ to traverse harsh terrain in microgravity conditions on an asteroid. Throw Zero-G/DEX 8+ to fire a weapon at boarders in microgravity. Throw Zero-G/STR 8+ to grapple someone in microgravity.

LANGUAGES

Characters know a number of languages, in addition to their culture's standard language, equal to their EDU modifier (see Characteristic Modifiers in **Chapter 4: Character Generation**). Certain careers also allow characters the opportunity to learn new languages as skill picks. After character generation, characters may learn additional languages using the experience rules (see below) by purchasing the language for10 XP. There are no skill levels of a language; either a character knows that language or they do not. The Referee is free to allow a Level 0 version of a language skill, representing a basic understanding of the language.

SKILL ADVANCEMENT

Cepheus Deluxe characters can slowly advance in skill through experience. Players advance their characters by spending Experience Points (XP). A Character will typically gain 1 XP per session. The Referee might award 2 XP for a session where the player did an outstanding job, or if the character was very successful. Characters can only advance skills during downtime in game: during periods of relative quiet and inactivity. Note that advancement is incremental: for example, to increase a skill from Level 1 to Level 3, the character must first purchase Level 2 and only then Level 3. In general, use of XP should allow a character to increase one skill by one level per game year.

Increasing Skills

Spend XP to increase skills per the following table. Skills can be improved by exercise or study, represented by spending XP, as noted in the Skill Level XP Cost table, below.

Note, however, that the total sum of a character's skill levels still may not exceed the sum of their current INT + EDU characteristics. If using Level 0 skills, these do not count towards the maximum skill levels.

SKILL LEVEL XP COST	
DESIRED SKILL LEVEL	XP COST
0	2
1	10
2	20
3	30
4	30
5	40

Learning Languages

You may learn a new language by investing 10 XP.

Gaining Traits

You may gain a new Trait by investing 30 XP. The character must meet all the prerequisites to purchase the Trait.

Optional Rule: Improving Characteristics

Some Referees may allow characters in their games to improve their characteristics. If this is the case, then any characteristic may be increased via XP expenditure, except for Social Standing.

To improve a characteristic **by one point**, spend XP equal to three times the new value. So, to improve a characteristic from 7 to 8 costs 24 XP. The human maximum for any characteristic is 15, and Referees may wish to limit the number of times a given characteristic may be improved to 2 or 3. Social standing can only be improved by social advancement, which is accomplished through role-playing and successful adventuring.

Your character starts the game as a skilled, experienced adult. This chapter will show you how to generate a character and take them through a career.

Step 1: Characteristics

Characteristics describe your character's general talents and abilities. They serve as basic skills – for tasks which every human (or alien!) can perform, but some can perform better or worse than others. They also modify your character's skill throws, representing your natural aptitude with various tasks.

Assign the following array to the six characteristics in any order desired to your six characteristics: 5, 6, 7, 8, 9, 10.

The characteristics are:

Strength (STR): Physical prowess and brute force.

- Strength determines a character's carrying capacity.
- Add your STR DM to your melee damage. Note, however, that even with low STR, any attack that hits does at least 1 point of damage (before armor).
- Strength modifies skill throws related to brute force and feats of raw might.

Dexterity (DEX): Agility, coordination, and speed

- Dexterity is the attribute used for throwing knives and grenades, as well as evading physical threats.
- Add your DEX DM to your ranged attack throws.
- Dexterity modifies skill throws related to coordination and speed.

Endurance (END): Physical resilience, fitness, and force of will.

- Endurance helps the character resist biological threats such as disease and poison.
- Endurance determines your character's Stamina and Lifeblood, representing toughness and resistance to damage, respectively (see below).
- Endurance modifies skill throws related to physical resilience.

Intelligence (INT): Reasoning, creativity, and intellectual capabilities.

- Together with EDU, Intelligence determines the character's maximum number of skill ranks.
- Intelligence modifies skill throws related to reasoning, creativity, and perceptiveness.

Education (EDU): Formal schooling and general knowledge.

- Education 8+ allows rolling on the Advanced Education column in the career tables.
- A character gains a number of additional languages equal to their EDU DM.
- Together with INT, Education determines the character's maximum number of skill ranks.
- Education modifies skill throws related to academics, science, and knowledge.

Social Standing (SOC): A character's connections and position in society.

- Social Standing provides characters with a number of free contacts equal to their SOC DM.
- Social Standing often modifies skill throws in social settings.

Optional Rule: Assigned Points

Optional Rule: assign 42 points across all 6 characteristics as desired.

Characteristic DMs

Each characteristic has an associated Dice Modifier (DM) based on its value or score, as noted below:

Characteristic DM	
Characteristic Score	Characteristic DM
0-2	DM-2
3-5	DM-1
6-8	DM+0
9-11	DM+1
12-14	DM+2
15-17	DM+3
18-20	DM+4

Above 20, a character increases their characteristic DM by another +1 per three points – for example, 21-23 will have DM+5, and so on. This means that very powerful creatures will almost automatically succeed in throws using their powerful characteristic. This is intentional: a massive alien brute, for example, would be capable of feats of strength unattainable by most humans.

Using Characteristic Throws

Characteristics represent general human (or alien!) capabilities that every character possesses to one degree or another. This is opposed to skills, which represent specialized training. These include things such as fitness and agility (STR, END, and DEX), general reasoning (INT), general knowledge (EDU), and using connections and social innuendo to further one's ends (SOC). Anyone can jump to a certain distance (DEX), but not everyone can pilot a starship (Piloting skill). However, general aptitudes do influence even the actions of professionals, for example the DEX DM is often added to Piloting skill throws.

Characteristic throws use only the Characteristic DM, rather than Characteristic + Skill. Characteristic throws do not suffer the DM-3 Unskilled penalty. Characters never suffer the DM-3 Unskilled penalty for Athletics throws.

Example: A character with EDU 5 tries to recall a fun piece of trivia. The Referee calls for an EDU characteristic roll. The roll is 2D, DM-1.

Step 2: Homeworld Skill

At the age of 18, before embarking in a career, your character has already learned a single skill. Choose a homeworld type and one skill from its list.

Homeworld Skills	
Homeworld	Available Skills (Choose One)
High-tech core world	Computer-1, Grav Vehicles-1, Streetwise-1
Water World	Watercraft-1, Repair-1, Athletics-1
Capital World	Carousing-1, Grav Vehicle-1, Liaison-1
Frontier colony	Driving-1, Watercraft-1, Survival-1
Inhospitable outpost	Repair-1, Science-1, Zero-G-1
Primitive backwater	Animals-1, Recon-1, Survival-1

Step 3: Career

Characters start off at the age of 18. Then they "grow" through the character generation system.

Skill Packages	
Campaign Style	Skills Available
Exploration	Piloting-1, Engineering-1, Survival-1, Science-1, Repair-1
Military	Leadership-1, Gunnery-1, Melee Combat-1, Heavy Weapons-1, Tactics-1
Naval	Piloting-1, Computer-1, Repair-1, Gunnery-1, Engineering-1
Trading	Piloting-1, Engineering-1, Liaison-1, Medicine-1, Steward-1
Criminal	Streetwise-1, Stealth-1, Admin-1, Recon-1, Deception-1

Note that the total sum of a character's skill Levels can never exceed the sum of their INT + EDU characteristics. However, first generate the character and list all skills, even if they exceed this limit. After Mustering Out, if the total of your skill points exceeds the sum of your INT + EDU, you may choose which skills to reduce to bring your total under the character's INT + EDU. You may reduce skills to Level Zero, as they do not count against the character's skill level total.

The Referee determines the number of career Terms characters will go through prior to the game's start. Each Term represents roughly 4 years.

A. Term 1: Select a career. Your character begins their career at Rank 0.

1. Note your career's Service Skills. You can raise one Service Skill to level-1. The rest of the Service Skills are Level 0.
2. Pick TWO skill levels from that career's available skills tables: Service, Specialist, or Advanced Education.

2a. Characters must have an EDU 8+ to select from the Advanced Education table.

2b. A maximum of ONE skill level per term may be spent to improve any Characteristic by +1.

2c. No skill level may be higher than 2 in the **first term**.

2d. Roll on the Career's Event Table. This might increase the number of skills the character receives, or even cause injury. Note that if an event calls for a skill test, do not include any Attribute DMs. Just throw 2D and add the skill level, if any. If the character does not have the listed skill, do not apply any penalty.

2e. Increase the character's age by 4 years to 22 years old.

2f. OPTION: Roll 1D for the number of years the character ages this term.

A. Second and Subsequent Terms: Select skill levels from available tables.

1. As characters advance their careers, the number of skill levels available per term decreases. See the Master Character Generation Table, below.
2. A maximum of one skill level per term may be spent to improve any characteristic by +1.
3. Increase career Rank by 1 on terms 2, 4, and 6. Add additional Bonus Rank skills where indicated on the Rank Table.
4. Roll on the Career's Event Table.

ZERO-LEVEL SKILLS	
MILITARY AND PARAMILITARY CHARACTERS	PURELY CIVILIAN CHARACTERS
Athletics	Athletics
Drive	Drive
Gun Combat	Zero-G
Melee Combat	
Zero-G	

5. Increase the character's age by 4 years.

5a. OPTION: Roll 1D for the term length in years.

6. Roll for Aging Effects at the end of Term 4 and subsequent Terms. Note that even if the character is not yet 34 years old, begin rolling for aging effects at the end of Term

A. Mustering Out:

1. Roll for Mustering Out Benefits on the relevant career table. The number of Mustering Out Benefits is equal to 1, plus 1 per term served. The player may choose to roll on the Cash Benefits or Material Benefits table for each roll.

2. Rank as Mustering Out Benefit: you may purchase additional Rank levels with a Mustering Out Benefit. Each promotion costs one Mustering Out Benefit. Any promotions purchased this way also gain the character a bonus skill level. Increase a skill level by 1 or add a new skill at level 1. Mustering Out Benefits may only ever increase a given skill by one level, though multiple skills may be increased in this manner.

3. OPTION: The Referee may assign additional level-0 skills (see the Skills chapter).

4. OPTION: The Referee may wish that each character have a skill from a given Skill Package (see

MASTER CHARACTER GENERATION TABLE							
TERMS	SKILL LEVELS GRANTED	TOTAL SKILL LEVELS*	AGING?	RANK INCREASE?	TRAITS	MUSTERING OUT BENEFIT ROLLS	TOTAL EVENTS
0	1 (homeworld)	1	N		1	1	0
1	2, plus a level 1 service skill	4	N		1	2	1
2	2	6	N	+1	1	3	2
3	2	8	N		2	4	3
4	1	9	Y	+1	2	5	4
5	1	10	Y		3	6	5
6	1	11	Y	+1	3	7	6
7	1	12	Y		4	8	

below) in addition to their career skills. Select one skill from the indicated Skill Package at this time. Each skill from a Package may only be selected once, by one character.

5. Select 1 **Trait** from the Traits chapter for every 2 terms served, rounding up (see Master Character Generation Table, below).

Optional Rule: Switching Careers

Some Referees allow characters to switch careers during character generation. This is simple enough. Simply switch careers. The character begins at Rank 0, unless they are in a military career and switching into another military career—in that case, keep the character's rank the same (though you should convert Army ranks to equivalent Navy or Marine ranks).

Characters in their new career receive ONE Service Skill at Level-0, and then proceed normally in their new career, using the Master Character Generation Table to determine how many skill levels they may pick in their new profession. Mustering Out Benefits are rolled on the appropriate career table. Reduce the total number of Benefit rolls by one for each career change to reflect the hardships that starting a new career often entail.

AGENT

You were a police officer, government or corporate spy, or private investigator.

SERVICE SKILLS	SPECIALIST SKILLS	ADVANCED EDUCATION
Investigation	Deception	Pilot
Admin	Gun Combat	Language
Computer	Grav Vehicles	Liaison
Streetwise	Athletics	Science
Carousing	Driving	Medicine
Stealth	Recon	Leadership

RANK	TITLE	BONUS SKILL	MUSTERING OUT BENEFITS	CASH	MATERIALS
0	Agent		1D		
1	Special Agent		1	1000	Low Passage
2	Sp. Agent in Charge		2	5000	+1 INT
3	Unit Chief	Admin-1	3	10000	Weapon
4	Section Chief		4	10000	Contact
5	Assistant Director		5	20000	+1 SOC
6	Director		6	50000	High Passage

2D	AGENT EVENT TABLE
2	Injury. Roll on the Injury table.
3	Cybered! Your employer pays for advanced cybernetic implants. Gain Cr8000 worth of cybernetics.
4	Dangerous Mission. You are assigned to a dangerous mission above and beyond your normal duties. Roll Recon 8+, Streetwise 8+, or Gun Combat 8+. If you succeed, gain an additional Benefit roll. If you fail, roll on the Injury table.
5	Specialist Training. You receive advanced training. Throw EDU 8+ to increase any one skill by one level.
6	Labor Dispute. Your employers send you to infiltrate a group of striking workers or civilian protesters. If you try to avoid bloodshed, you give up your after-action bonus but gain the union leader as a Contact; Or you can doom the movement and gain another Benefit roll from the after-action bonus. However, the union leader escapes, and you gain them as an Enemy.
7	Life Event. Roll on the Life Event table.
8	Undercover. You participate in an undercover operation. Throw Streetwise 8+ or Deception 8+. If you succeed, pick one skill from the Specialist Skill table of the Rogue career. If you fail, roll on the Injury table.
9	Trusted Informant. You recruit a close informant. Throw Streetwise 8+ to gain a Contact.
10	Kidnapping Rescue. You participate in an operation to rescue a kidnapping victim. Throw Investigation 8+ or Stealth 8+; succeed, and you gain a hostage VIP as a Contact; fail and throw on the Injury Table.
11	Mentor. A senior officer befriends you. Gain Leadership or Admin and a Contact.
12	Conspiracy. You uncover a major conspiracy and are promoted as a reward. Gain one skill level and one rank. The nature of this conspiracy is at the Referee's discretion.

ARMY

You served in a planetary military or mercenary force.

SERVICE SKILLS	SPECIALIST SKILLS	ADVANCED EDUCATION
Gun Combat	Repair	Computer
Recon	Tactics	Admin
Heavy Weapons	Stealth	Medicine
Melee Combat	Demolitions	Jack o' Trades
Driving	Survival	Leadership
Athletics	Grav Vehicles	Gunnery

RANK	TITLE	BONUS SKILL	MUSTERING OUT BENEFITS	CASH	MATERIALS
0	Private		1D		
1	Lieutenant	Leadership-1	1	1000	Low Passage
2	Captain		2	5000	+1 INT
3	Major	Tactics-1	3	10000	Weapon
4	Lt. Colonel		4	10000	Mid Passage
5	Colonel		5	20000	Weapon
6	General	SOC+1	6	50000	High Passage

2D	ARMY EVENT TABLE
2	Injury. Roll on the Injury table.
3	Cybered! The military pays for advanced cybernetic implants. Gain Cr8,000 worth of cybernetics.
4	Hostile World. You are stationed on a world with a hostile or wild environment. Gain one of Animals, Survival, or Zero-G.
5	Street Fighting. You fight a battle in an urbanized area. Gain one of Tactics, Stealth, or Streetwise.
6	Budget Cuts. Your government cuts your unit's budget. Throw Admin 8+ to regain funds for your unit; if you succeed, gain your unit's commander as a Contact. If you fail, gain a government official as an Enemy.
7	Life Event. Roll on the Life Event table.
8	Police Action. You are involved in counter-insurgency operations. Throw DEX 8+ or END 8+. If you succeed, gain Liaison, Recon, Leadership, or Tactics. If you fail, roll on the Injury table.
9	Garrison. You are assigned to garrison duty. Gain one of Admin, Carousing, or Streetwise.
10	Bug Hunt! You fight hostile xenofauna. Throw Gun Combat 8+; if you succeed, gain Animals or Survival. If you fail, roll on the Injury Table.
11	Electronic Warfare. You train in advanced SIGINT and cyber-warfare techniques. Gain a level in Computer.
12	Advancement. Your heroic service in battle gains you a promotion. Gain one free skill level and increase your rank by one.

BELTER

You were a hard-working asteroid miner or other blue-collar spacer.

SERVICE SKILLS	SPECIALIST SKILLS	ADVANCED EDUCATION
Repair	Jack o' Trades	Admin
Demolitions	Carousing	Medicine
Piloting	Engineering	Grav Vehicles
Computers	Streetwise	Liaison
Zero-G	Gunnery	Science
Athletics	Melee Combat	Leadership

RANK	TITLE	BONUS SKILL	MUSTERING OUT BENEFITS	CASH	MATERIALS
0	Miner		1D		
1	Roughneck		1	1000	Low Passage
2	Crew Boss		2	5000	+1 INT
3	Foreman		3	5000	Space Suit
4	Rep	Admin-1	4	10000	Mid Passage
5	Senior Rep		5	30000	+1 EDU
6	Local President		6	100000	Prospector

2D	BELTER EVENT TABLE
2	Injury. Roll on the Injury table.
3	Specialist Training. You get on-the-job training. Gain one of Computer, Science, Admin, or Demolitions.
4	Explosion. An impending mining explosion threatens your ship or mine. Zero-G 8+. If you succeed, gain Demolitions; if you fail, roll on the Injury Table.
5	Protection Racket. Pirates organize a protection racket in your belt. If you pay, lose one Benefit roll. If you resist, throw Gun Combat 8+ or Melee Combat 8+. If you succeed, gain Streetwise but also a pirate Enemy; if you fail, roll on the Injury Table.
6	Bureaucracy. You find yourself counting beans for your mining operation. Gain Admin.
7	Life Event. Roll on the Life Event table.
8	Drone Operations. You oversee a delicate remote mining operation. Roll Computer 8+ to gain an extra Benefit roll.
9	Strike! Miners at your site go on strike. Support the strike and gain a Contact in the union and an Enemy in management. Scab and gain an extra Benefit roll and an Enemy in the union.
10	Investment. A major bank invests in your mining operation. Roll Admin 8+ to gain an additional Benefit roll.
11	Cyberterrorism. A terrorist hacker subverts your ship's drones and robots. Throw Gun Combat 8+ or Computer 8+; if you succeed gain a level of Computer; if you fail, roll on the Injury Table.
12	Advancement. You automatically Advance after discovering a major strike. Gain a free skill level and one rank.

COLONIST

You packed your bags and made a life on a distant frontier world.

SERVICE SKILLS	SPECIALIST SKILLS	ADVANCED EDUCATION
Survival	Liaison	Science
Repair	Melee Combat	Medicine
Jack o' Trades	Grav Vehicles	Computer
Animals	Gun Combat	Admin
Driving	Leadership	Aircraft
Carousing	Recon	Watercraft

RANK	TITLE	BONUS SKILL	MUSTERING OUT BENEFITS	CASH	MATERIALS
0	Citizen		1D		
1	District Leader		1	1000	Low Passage
2	District Delegate	Admin-1	2	5000	+1 INT
3	Council Advisor		3	5000	Weapon
4	Councilor	Liaison-1	4	5000	Mid Passage
5	Lieutenant Governor		5	10000	Contact
6	Governor		6	20000	High Passage

2D	COLONIST EVENT TABLE
2	Injury. Roll on the Injury table.
3	Friends in High Places. You befriend a senior corporate or government official. Gain them as a Contact.
4	Xenomorphs! Deadly organisms infiltrate your colony; carnage ensues. Throw Gun Combat 8+ or Science 8+ to avoid a roll on the Injury table; if you succeed, gain a level in Survival.
5	Crime. You have a chance to get involved in a criminal gang. Avoid this opportunity and gain its leader as an Enemy. Join in, and throw Admin 8+, Stealth 8+, or Streetwise 8+; on success, you gain an extra benefit roll; on failure, you go to Prison.
6	Growth. Your colony thrives. Gain DM+2 to one of your Benefit rolls.
7	Life Event. Roll on the Life Event table.
8	Hard Work. You work hard at your job. Gain either Admin, Computer, or Repair.
9	Colonial Strife. Social strife on your colony explodes into bloodshed. Join the rebels and gain Gun Combat or Demolitions but you must throw Gun Combat 8+ to avoid an Injury table roll. Stay away from violence and avoid risk to life and limb, but you gain no skill.
10	Industrial Accident. Faulty safety measures result in a major disaster at your colony. Roll Repair 8+ or Science 8+. If you succeed, gain a Contact in the colonial administration. If you fail, lose one Benefit.
11	Underground Politics. You encounter an illegal political movement. Turn them in to gain a Benefit roll and gain their escaped leader as an Enemy. Join, and throw Demolitions 8+. Stealth 8+ or Streetwise 8+; if you succeed, gain the movement's leader as a Contact; if you fail, go to Prison.
12	Advancement. Your hard work has been recognized. You gain one rank and one free skill level.

ELITE

You were a member of the upper crust of society, a diplomat, or a junior executive.

SERVICE SKILLS	SPECIALIST SKILLS	ADVANCED EDUCATION
Admin	Leadership	Medicine
Liaison	Melee Combat	Sciences
Carousing	Athletics	Aircraft
Computer	Steward	Animals
Grav Vehicles	Watercraft	Piloting
Deception	Streetwise	Computer

RANK	TITLE	BONUS SKILL	MUSTERING OUT BENEFITS	CASH	MATERIALS
0	Analyst		1D		
1	Supervisor		1	2000	Contact
2	Manager		2	10000	+1 EDU
3	Director		3	20000	+1 SOC
4	Managing Director	Admin-1	4	40000	High Passage
5	Vice President		5	50000	Yacht
6	President		6	100000	Explorer's Society

2D	ELITE EVENT TABLE
2	Injury. Roll on the Injury table.
3	Celebrity Status. You are part of your homeworld's celebrity circles. Gain one level of Carousing, Liaison, or Steward.
4	Cybered! Your patrons (or parents) pay for advanced cybernetic implants. Gain Cr10000 worth of cybernetics.
5	Inheritance. You inherit a gift from a rich relative. Gain an extra Benefit roll.
6	Conspiracy. You are invited to join a conspiracy against the locally dominant corporation. If you refuse the offer, gain an Enemy. If you accept the offer, throw Deception 8+ or Liaison 8+. If you succeed, gain one of Carousing, Liaison, or Deception. If you fail, throw Admin 10+ to avoid spending a term in Prison.
7	Life Event. Roll on the Life Event table.
8	Corporate Infighting. You can criticize, or even bring down, a questionable corporate executive. If you refuse and support the exec, gain both a Contact and an Enemy. If you attempt to discredit the exec, roll Liaison 8+ or SOC 8+. If you succeed, gain their primary rival as a Contact. If you fail, reduce SOC by 1.
9	Acclaimed Leadership. Your directorship is acclaimed by all as being fair and wise. Gain either a jealous rival or an unhappy subordinate as an Enemy but also gain a DM+2 on your next Benefit throw.
10	Interstellar Tour. You go on a tour, visiting several different worlds. Gain Piloting, Animals, or Zero-G.
11	Alliance. You make an alliance with a powerful and charismatic member of the government. Gain a Contact and either a level of Leadership or a DM+2 on your next Benefit throw.
12	Advancement. Your high-level dealings have been very successful. You gain a rank, and a free skill level.

MARINE

You were a member of spacefaring infantry, specializing in boarding actions and planetary assault

SERVICE SKILLS	SPECIALIST SKILLS	ADVANCED EDUCATION
Gun Combat	Carousing	Survival
Heavy Weapon	Repair	Admin
Athletics	Demolitions	Computer
Gunnery	Recon	Piloting
Melee Combat	Tactics	Medicine
Zero-G	Stealth	Engineering

RANK	TITLE	BONUS SKILL	MUSTERING OUT BENEFITS	CASH	MATERIALS
0	Trooper		1D		
1	Lieutenant	Leadership-1	1	1000	+1 EDU
2	Captain		2	5000	Weapon
3	Major	Tactics-1	3	5000	Mid Passage
4	Lt. Colonel		4	10000	+1 SOC
5	Colonel		5	20000	High Passage
6	Brigadier		6	50000	Explorer's Society

2D	MARINE EVENT TABLE
2	Injury. Roll on the Injury table.
3	Special Forces. You receive special forces training. Throw END 8+. If you succeed, gain Computers, Demolitions, or Recon. If you fail, you suffer DM-1 to one Benefit roll.
4	Advanced Training. You receive advanced training. Throw EDU 8+. If you succeed, increase any skill you already have by one.
5	Cybered! The Corps pays for advanced cybernetic implants. Gain Cr10000 worth of cybernetics.
6	Counterterrorism. Your unit responds to a terrorist attack. Throw Gun Combat 8+ or Stealth 8+; on success, gain DM+4 to your next Benefit throw; on failure, roll on the Injury table.
7	Life Event. Roll on the Life Event table.
8	Bug Hunt! You fight hostile xenofauna. Throw Gun Combat 8+; if you succeed, gain Animals or Survival. If you fail, roll on the Injury table.
9	Labor Dispute. Your employers send your unit to suppress striking workers or civilian protesters. Try to avoid bloodshed and give up your after-action bonus but gain the union leader as a Contact; go in with guns blazing and gain another Benefit roll from the after-action bonus, but also an escaped union leader as an Enemy.
10	Boarding Action. You are involved in a violent boarding action in space. Throw Melee Combat 8+ or Gun Combat 8+. If you succeed, gain either Zero-G, Tactics, or Leadership. If you fail, roll on the Injury table.
11	Political Ally. Your commanding officer takes a professional interest in you. Gain a DM+2 to one Benefit roll due to their influence. Gain a Contact.
12	Advancement. Your heroic service is recognized. You gain a rank and a free skill level.

MERCHANT

You were an independent spacefaring trader or worked for an interstellar corporation.

SERVICE SKILLS	SPECIALIST SKILLS	ADVANCED EDUCATION
Steward	Gun Combat	Medicine
Repair	Melee Combat	Science
Liaison	Piloting	Survival
Carousing	Gunnery	Language
Admin	Streetwise	Engineering
Zero-G	Stealth	Computers

RANK	TITLE	BONUS SKILL	MUSTERING OUT BENEFITS	CASH	MATERIALS
0	Crewmember		1D		
1	Deck Cadet	Leadership-1	1	2000	Low Passage
2	Fourth Officer		2	10000	+1 EDU
3	Third Officer		3	20000	Weapon
4	Second Officer	Pilot-1	4	30000	Contact
5	First Officer		5	40000	High Passage
6	Captain		6	50000	Trader

2D	MERCHANT EVENT TABLE
2	Injury. Roll on the Injury table.
3	Cybered! A good trade deal or corporate favor earns you Cr6000 worth of cybernetic implants.
4	Smuggler. You are offered the opportunity to smuggle illicit items. If you accept, throw Admin 8+ or Streetwise 8+. If you succeed, gain a level of the skill you rolled and an extra Benefit roll. If you fail, gain an Enemy.
5	Risky Business. You have a chance to risk your fortune on the possibility of a lucrative deal. You may risk as many Benefit rolls as you have. Throw Admin 8+ or Streetwise 8+. If you succeed, you gain half as many additional Benefits as you risked, rounded up. If you fail, you lose the Benefits you risked. Either way, gain a level of the skill that you rolled.
6	Good Deal. You make a good deal on some merchandise. Gain a +1 DM on a Benefit roll.
7	Life Event. Roll on the Life Event table.
8	Legal Trouble. You are caught up in a legal battle. Throw Admin 8+. If you succeed, gain one of Admin, or Liaison. If you fail, you must spend next term in Prison.
9	Advanced Training. You receive advanced training. Throw EDU 8+. If you succeed, gain a level of Admin, Engineering, Computer, Piloting, or Zero-G.
10	Pirate Raid. Pirates or privateers attack your ship. Throw Gun Combat 8+, Gunnery 8+ or Dexterity 10+. If you fail, roll on the Injury table. If you succeed, gain another Benefit.
11	Xenomorphs! You encounter deadly planetary, or space born organisms. Throw Gun Combat 8+ or Melee Combat 8+ to avoid a roll on the Injury table. If you succeed, gain a level in Survival.
12	Advancement. Your wheeling and dealing pay off big-time. You gain a rank, and a free skill level.

NAVY		
You were a member of an interstellar space navy.		
SERVICE SKILLS	**SPECIALIST SKILLS**	**ADVANCED EDUCATION**
Zero-G	Piloting	Science
Repair	Carousing	Admin
Computers	Melee Combat	Medicine
Gunnery	Leadership	Tactics
Gun Combat	Engineering	Jack o' Trades
Athletics	Survival	Liaison

RANK	TITLE	BONUS SKILL	MUSTERING OUT BENEFITS	CASH	MATERIALS
0	Starhand		1D		
1	Ensign	Leadership-1	1	1000	Low Passage
2	Lieutenant		2	5000	+1 EDU
3	Lt. Commander	Tactics-1	3	5000	Weapon
4	Commander		4	10000	Mid Passage
5	Captain		5	20000	+1 SOC
6	Commodore	SOC+1	6	50000	High Passage

2D	NAVY EVENT TABLE
2	Injury. Roll on the Injury table.
3	Gambling Ring. You join a gambling ring aboard your ship during your down time. If you wish, you may risk a Benefit roll. Throw Carousing or Streetwise 8+. If you succeed, gain an additional Benefit roll. If you fail, lose a Benefit roll.
4	Cybered! The Navy pays for advanced cybernetic implants. Gain Cr10000 worth of cybernetics.
5	Ship Destroyed. Your ship suffers severe damage in battle. You may attempt to save some of your shipmates, risking your own life. If you choose to try to save them, throw DEX 8+ or Repair 8+. If you succeed, gain a Contact among the crewmembers you saved and DM+2 on a Benefit throw. If you fail, roll on the Injury table. If you choose to only save yourself, you escape unarmed but with no benefits.
6	Advanced Training. You receive advanced training in a specialist field. Throw EDU 8+ to gain one level of any skill you already have.
7	Life Event. Roll on the Life Event table.
8	Naval Battle. Your ship participates in a naval battle against raiders or a rival navy. Throw Gunnery 8+ or Piloting 8+; succeed, and gain one of Computer, Gunnery, Engineering or Piloting; fail, and roll on the Injury table.
9	Mutiny. You foil an attempted mutiny on your ship. Gain an Enemy among the escaped mutineers, but also a DM+2 on one Benefit roll.
10	Xenomorphs! Deadly organisms infiltrate your ship. Throw Gun Combat 8+ or Melee Combat 8+ to avoid a roll on the Injury table. If you succeed, gain a level in Zero-G.
11	Electronic Warfare. You train in advanced inter-ship cyber-warfare techniques. Gain a level in Computer.
12	Advancement. Your exemplary service has gained you a promotion. You gain a rank, and one free skill level.

PIRATE

You were a space outlaw, a crewmember of a pirate ship.

SERVICE SKILLS	SPECIALIST SKILLS	ADVANCED EDUCATION
Streetwise	Deception	Liaison
Repair	Carousing	Engineering
Gun Combat	Piloting	Jack o' Trades
Melee Combat	Tactics	Computer
Zero-G	Demolitions	Medicine
Recon	Gunnery	Admin

RANK	TITLE	BONUS SKILL	MUSTERING OUT BENEFITS	CASH	MATERIALS
0	Crewmember		1D		
1	Midshipman		1	1000	+1 INT
2	Lieutenant	Pilot-1	2	5000	Weapon
3	Lt. Commander		3	10000	High Passage
4	Commander		4	20000	+1 SOC
5	Captain	Leadership-1	5	40000	High Passage
6	Dread Pirate		6	80000	Corsair

2D	PIRATE EVENT TABLE
2	Injury. Roll on the Injury table.
3	Gambling Ring. You join a gambling ring aboard your ship during your down time. If you wish, you may risk a Benefit roll. Throw Carousing 8+ or Streetwise 8+. If you succeed, gain an additional Benefit roll. If you fail, lose the Benefit roll you risked.
4	Smuggling. Pirates often dabble in smuggling, and such an opportunity arises. Throw Deception 8+, or Streetwise 8+; if you succeed, gain an extra benefit. If you fail, go to Prison.
5	Cybered! Your bosses pay for advanced cybernetic implants. Gain Cr6000 worth of cybernetics.
6	Colonial Raid. You raid a frontier colony. Throw Recon 8+ or Liaison 8+ to locate good loot; if you succeed, gain an extra Benefit roll.
7	Life Event. Roll on the Life Event table.
8	Prize Catch. You board a merchant vessel. Throw Zero-G 8+ or Gun Combat 8+; if you succeed gain an extra Benefit roll; if you fail, roll on the Injury table.
9	Naval Battle. Your ship participates in a naval battle against a governmental navy, corporate forces, or rival corsairs. Throw Gunnery 8+ or Piloting 8+; succeed, and gain one of Computer, Gunnery, Engineering or Piloting; fail, and roll on the Injury table.
10	Yarrr! You befriend a famous pirate. Gain them as a Contact.
11	Stranded! Your ship crash-lands and you are stranded on a marginally habitable far-frontier world. Throw END 8+; if you succeed, gain a level in Survival; if you fail, roll on the Injury table.
12	Advancement. You are quickly becoming a legend among pirates. You gain a rank, and a free skill level.

ROGUE

You were a criminal, drifter, or other ne'er do-well.

SERVICE SKILLS	SPECIALIST SKILLS	ADVANCED EDUCATION
Streetwise	Melee Combat	Survival
Recon	Liaison	Jack o' Trades
Gun Combat	Athletics	Language
Deception	Driving	Medicine
Stealth	Admin	Tactics
Carousing	Repair	Computers

RANK	TITLE	BONUS SKILL	MUSTERING OUT BENEFITS	CASH	MATERIALS
0	Independent		1D		
1	Associate		1	1000	Low Passage
2	Made Soldier	Gun Combat-1	2	5000	+1 INT
3	Lieutenant		3	5000	Weapon
4	Underboss		4	10000	Contact
5	Consigliere		5	20000	Weapon
6	Boss		6	30000	Mid Passage

2D	ROGUE EVENT TABLE
2	Injury. Roll on the Injury table.
3	Rat! You have an opportunity to inform on a rival criminal. Betray them to the authorities and gain an extra Benefit roll but receive them as an Enemy; keep your mouth shut, and the rivalry is over - receive them as a Contact.
4	Cybered! Your boss pays for advanced cybernetic implants. Gain Cr6000 worth of cybernetics.
5	Look at You, Hacker! You engage in cybercrime. Throw Computer 8+; if you succeed, gain an additional Benefit throw. If you fail, go to Prison.
6	Caught! You may try to defend yourself; throw Admin 8+ to avoid going to Prison. Alternatively, you may hire a hotshot lawyer to defend you; lose one Benefit roll but gain the lawyer as a Contact.
7	Life Event. Roll on the Life Event table.
8	Heist! You participate in a high-stakes criminal operation. Throw Computer 8+, Stealth 8+, or Streetwise 8+; if you succeed, gain an extra Benefit throw. If you fail, go to Prison.
9	Gang War! You become involved in a feud between gangs. Throw Gun Combat 8+ or Melee Combat 8+; if you succeed, gain a level in Streetwise; if you fail, roll on the Injury table. You gain an Enemy in the rival gang in any case.
10	Gambling Ring. You join a gambling ring – or even organize one. If you wish, you may risk a Benefit roll. Throw Carousing 8+ or Streetwise 8+. If you succeed, gain an additional Benefit roll. If you fail, lose the Benefit roll you risked.
11	Mentor. You befriend a boss of a famous criminal gang. Gain them as a Contact.
12	Advancement. Crime really does pay. Gain a rank, and a free skill level.

SCHOLAR

You were a scientist, doctor, or researcher.

SERVICE SKILLS	SPECIALIST SKILLS	ADVANCED EDUCATION
Admin	Survival	Piloting
Computer	Language	Zero-G
Repair	Carousing	Animals
Liaison	Engineering	Recon
Investigation	Jack o' Trades	Athletics
Science	Medicine	Leadership

RANK	TITLE	BONUS SKILL	MUSTERING OUT BENEFITS	CASH	MATERIALS
0	Student		1D		
1	Researcher		1	1000	Contact
2	Research Adjunct		2	5000	+1 EDU
3	Assistant Professor	Liaison-1	3	10000	+1 INT
4	Associate Professor		4	20000	Mid Passage
5	Professor		5	20000	+1 SOC
6	Distinguished Professor		6	50000	Research Vessel

2D	SCHOLAR EVENT TABLE
2	Injury. Roll on the Injury table.
3	Cybered! Your academic institute pays for advanced cybernetic implants. Gain Cr6000 worth of cybernetics.
4	Breakthrough! You make a breakthrough in your research. Gain DM+2 to one Benefit roll.
5	Field Work. You conduct your research on the far frontier. Gain a level in Survival or Repair.
6	Immoral Research. You are offered an opportunity to engage in immoral, potentially illegal, research. Accept, and gain a level in Science, Deception, or Medicine; refuse, and you do not receive this skill; blow the whistle and gain the project lead as an Enemy.
7	Life Event. Roll on the Life Event table.
8	Confidential Project. You work on a secret project for a powerful organization. Keep your mouth shut and gain a level in Science, Liaison, or Medicine. Sell the results to a rival company and gain an extra Benefit roll but the organization as your Enemy.
9	Plagiarism. You have an opportunity to steal another scholar's work. Exploit it, and receive an extra Benefit roll, but gain your victim as an Enemy; avoid the temptation, and you gain nothing but integrity.
10	Talent Grab. A rival organization decides to kidnap you and force you to work for them. Try to escape and throw DEX 8+ to avoid Injury; jump ship and gain an extra Benefit roll from your new employer but gain your former employer as an Enemy.
11	Mentor. You work with a prominent and famous academic in your field. Gain them as a Contact.
12	Advancement. Your research has been phenomenally successful. Gain a rank, and a free skill level.

SCOUT

You were an intrepid explorer, surveyor, or courier.

SERVICE SKILLS	SPECIALIST SKILLS	ADVANCED EDUCATION
Piloting	Gunnery	Admin
Repair	Athletics	Grav Vehicles
Computer	Recon	Medicine
Gun Combat	Science	Tactics
Zero-G	Investigation	Engineering
Survival	Stealth	Jack o' Trades

RANK	TITLE	BONUS SKILL	MUSTERING OUT BENEFITS	CASH	MATERIALS
0	Scout		1D		
1	-		1	1000	Low Passage
2	-		2	5000	+1 INT
3	-	Science-1	3	10000	Weapon
4	Senior Scout		4	10000	Mid Passage
5	-		5	20000	Space suit
6	-		6	50000	Scout Ship

2D	SCOUT EVENT TABLE
2	Injury. Roll on the Injury table.
3	Ambushed. A rival corporate or pirate vessel ambushes your ship. If you choose to run, throw Piloting 8+ to escape; if you fail, roll on the Injury table. If you choose to fight, throw Gunnery 8+; If you succeed, gain a DM+1 on one Benefit roll; if you fail, roll on the Injury table.
4	Cybered! Your employers pay for advanced cybernetic implants. Gain Cr6000 worth of cybernetics.
5	Survey Duty. You survey an alien world. Gain one of Animals, Admin, or Science.
6	Exemplary Service. You perform a great, but secret, service to the Scout Bureau or a corporation. Gain DM+1 on one Benefit roll.
7	Deep Space Travel. You spend several years jumping from world to world. Gain one of Engineering, Computer, Piloting, or Zero-G.
8	Life Event. Roll on the Life Event table.
9	Rescue Mission. Your ship is the first vessel on the scene of a disaster. Throw Engineering 8+ or Medicine 8+. If you succeed, gain a level in the skill you tested and a Contact. If you fail, gain an Enemy.
10	Xenomorphs! You encounter deadly planetary organisms. Throw Gun Combat 8+ or Melee Combat 8+ to avoid a roll on the Injury table. If you succeed, gain a level in Survival.
11	Courier Duty. You serve as a courier for important messages for a corporation or the Scout Bureau. Gain either Liaison, Steward, or a high-ranking Contact in a megacorp.
12	Bonanza! You spend time on the fringes of known space and discover a new world or unsanctioned colony of great worth. Gain an extra Benefit roll and one free skill level.

LIFE EVENTS

Roll on the following table if you roll a Life Event on the Event tables above.

2D	LIFE EVENTS TABLE
2	Sickness or Injury. You suffer an injury or illness. Roll on the Injury table.
3	Birth or Death. Someone close to the character dies or is born.
4	Good Fortune. Something good happens to you. Gain DM+1 on one Cash Benefit roll.
5	Ending of Relationship. A romantic relationship or important friendship ends – badly. Change a Contact into an Enemy. If you do not have a Contact, you still gain an Enemy.
6	Improved Relationship. A romantic or friendly relationship deepens, possibly leading to marriage or a lasting friendship. Change an Enemy into a Contact. If you don't have an Enemy, gain a Contact.
7	New Relationship. You become involved in a romantic relationship. Gain a Contact.
8	Travel. You spend a lot of time travelling between worlds. Gain either Steward-1 or Carousing-1.
9	Study. You work to improve yourself. Gain +1 to EDU.
10	Crime. You commit, or are accused of committing, a crime. Lose one Benefit roll. Throw Admin 8+. If you fail, you must spend the next Term in Prison.
11	Cybersurgery. You undergo surgery to install commonplace cybernetics. Gain any implants with a total cost of Cr5000.
12	Unusual Event. Something strange or unusual happens t2o you. Roll on the Unusual Events table.

1D	UNUSUAL EVENTS TABLE
1	Missing Time. For an unknown reason, there is a period of 3D days you cannot remember.
2	Psionics. Gain basic Psionic training. See the Psionics chapter.
3	Trait. Gain a free Trait.
4	Underworld Contacts. You join a gang or acquaint yourself with criminal figures. Gain a senior criminal Contact.
5	Contact with Government or Corporations. You briefly encounter a senior government or corporate VIP. Gain them as a Contact.
6	Alien Artifact. You somehow find an alien artifact. Its nature is up to the Referee.

MUSTERING OUT BENEFITS

Characters may gain cash or material benefits from Mustering Out. Roll on the Material or Cash Benefit tables on the appropriate career table.

Cash benefits can be spent on equipment, weaponry, trade goods for speculative trade, or saved for later. Characters with the Carouse skill may throw Carouse/SOC 10+ to gain a DM+1 on a given Cash Benefit Table roll. If they fail, they get a DM-1 to the roll instead. Penalties or bonuses to the Mustering Out Benefit rolls can never raise the result over 6 or lower it below 1.

Characters may gain one or more of the following material benefits:

Contact: gain an important and useful relationship with a person or group who can provide you with significant favors: an arms dealer might provide otherwise unobtainable gear, while a corporate exec could serve as a patron and supply highly useful information on the corporate world. Contacts typically stay on one world, but some do move around. Abusing contacts and not reciprocating the positive relationship can lead to the loss of the contact. Note that characters with a positive SOC DM gain a number of free contacts equal to that DM.

Corsair: gain a 300-ton pirate corsair. The ship belongs to a pirate boss or gang; you owe them big time for the use of the ship, and they will request favors from time to time. You pay for all regular operating costs and owe half the profits from your piracy to the boss or gang.

Free trader: gain a 200-ton Free Trader ship. The character must make mortgage payments of Cr150000 a month for the next forty years. Each additional time you receive this benefit reduces this by ten years; receive it four times, and you don't have to pay a mortgage; but you get a 40-year-old antique!

Explorer's Society: Become a member of the exclusive Explorer's Society. Membership grants a free high-passage ticket for one parsec every two months and free stay at Society hostels in most starports.

Passage: Gain a single ticket of the type named (low, middle, high) for travelling one jump (up to two parsecs) on a starship.

Prospector: Gain partial ownership in a 100-ton Prospector – typically subsidized by the government or handed down due to military or commercial arrangements. You must pay operating expenses and maintenance. You don't owe any payments for the ship, but it is a 1D decades old rust bucket – beware!

Research vessel: gain a 200-ton Research Vessel. The ship belongs to a research institute and the character pays for regular operating expenses, except for annual maintenance. The research institute has a right to veto certain activities and missions that the character might undertake—often, the research institute will insist on an NPC minder to be part of the crew. The institute's leadership may also require that the scholar undertake missions for them from time to time.

Scout ship: gain a 100-ton Scout Ship. The Scout Service still owns the ship but makes it available to you on reserve basis. You gain free maintenance and refueling for the vessel at Scout bases. Expect the Scout Service to have missions for you from time to time.

Weapon: Gain any non-heavy personal weapon or weapons up to TL12 (the Referee might change the TL for their game). The weapon or weapons may be worth up to Cr1000 in value including ammunition. Multiple benefits of this kind allow either multiple weapons or a more expensive weapon. Weapon modifications are included in this budget as well.

Alternatively, the character may opt to take personal armor, or, at the Referee's discretion, cybernetics, under the same restrictions, customized as desired by the character under the given budget

Space suit: the character receives a standard issue space suit. Multiple benefits of this kind allow the character to upgrade to a Hostile Environment Space Suit, or an Advanced Space Suit, their choice.

Yacht: gain the use of a 100-ton yacht from a government or corporation. You are responsible for all costs and maintenance and owe favors to said government or corporation. They will call in those favors from time to time.

RETIREMENT PAY

Characters who retire after 5 terms (age 38) or more receive an annual retirement pay. The base pay at 5 terms is Cr10000 a year; each additional term served in that career adds Cr2000 per year. Do not count prison terms towards determining if a character receives retirement pay.

AGING

Characters must make aging rolls beginning at the age of 34, or at the end of 4 terms, if rolling for term length. At the end of the 4th term, and on the end of each subsequent term, throw 2D on the following table. The character's total number of terms serves as a negative DM to the throw. The Referee might add DM+2 for characters living in technologically advanced societies with good health care (see below).

AGING CRISIS

If any characteristic falls to 0 due to aging, the character must throw 6+ to survive. If still alive, they will now

have that characteristic at 1, and must retire from their career.

Optional Rule: Aging and Technology

Advanced medicine prolongs life and delays aging. At TL9-11, add DM+1 to all aging rolls during character generation. This DM increases to DM+2 at TL12-14, and to DM+3 at TL15+.

AGING EFFECT TABLE	
EFFECT	**EFFECT OF AGING**
-6	Reduce three physical characteristics by 2, reduce one mental characteristic by 1
-5	Reduce three physical characteristics by 2.
-4	Reduce two physical characteristics by 2, reduce one physical characteristic by 1
-3	Reduce one physical characteristic by 2, reduce two physical characteristics by 1
-2	Reduce three physical characteristics by 1
-1	Reduce two physical characteristics by 1
0	Reduce one physical characteristic by 1
1+	No effect

Prison

When an Event sends you to prison, you spend one Term as a prisoner. You do not receive a Benefit for this Term; however, you may resume your previous career afterwards. Do not count Prison terms towards automatic promotion terms in a career. Pick one skill level from the following table and roll for a prison event.

PRISON SKILLS
Athletics
Deception
Melee Combat
Repair
Steward
Streetwise

Injury Rules

You should roll on the following Injury table whenever an Event result says so. In this case, the character suffers an injury, but may continue their career.

Note that this is the far future; maimed characters can rely on cybernetics for recovery. Deduct the cost of cybernetics listed below from the character's starting funds. If the funds run out, and medical cybernetics debt remains, the character owes money to someone

PRISON EVENT TABLE	
2D	**PRISON EVENT**
2	Sickness or Injury. You suffer an injury or illness. Roll on the Injury table.
3	Escape Attempt: you attempt a daring, foolhardy escape! Roll Deception 10+, Stealth 10+ or Admin 10+. If you succeed, you escape, and now enter the Rogue career. If you fail, roll on the Injury table, and spend the next term in Prison!
4	Gang Recruitment: one of the prison gangs attempts to recruit you. Agree, and gain a Contact from the criminals. Refuse and roll Melee Combat 8+; if you succeed, gain a contact in law enforcement. If you fail, roll on the Injury table, and gain a law enforcement contact.
5	Smuggling: you get involved in a lucrative smuggling racket, getting luxuries from outside. Roll Streetwise 8+ to gain one Benefit roll on your career table. Fail, and lose one Benefit roll.
6	Forced Labor: the prison farms you out to local frontier colonists who benefit from your toil. Gain Athletics-1.
7	Cell Mates: you form a strong relationship with a cellmate. Gain a Contact.
8	Prison Riot! Bedlam in your cell block! Roll Melee Combat 8+, Stealth 8+, or Liaison 8+ to avoid rolling on the Injury table. Either way, gain a level in the skill you rolled.
9	Study. You work hard in the prison library to improve yourself. Gain +1 to EDU.
10	Assault a Guard: you were provoked! Roll Melee Combat 8+. Succeed, and gain a level of Streetwise and a criminal contact. Fail, and roll on the Injury table.
11	Experimentation. You are used as a guinea pig for unethical scientific research. Roll END 8+. If you succeed, gain the Hard to Kill trait. If you fail, lose one point of END.
12	Paroled for good behavior! You may select one skill from your eligible career skills and resume your career normally next term.

powerful: a government, a corporation, or an organized crime syndicate.

Upon being injured, throw END 6+, note the throw's Effect, and consult the Injury table.

INJURY TABLE	
EFFECT	**RESULT**
-6 or less	The character is nearly killed. Reduce one physical characteristic by 1D, and both other physical characteristics by 2 (or one of them by 4). Roll 1D: 1-2, the character loses a leg; 3-4, the character loses an arm; 5, the character loses an eye; 6, the character loses both eyes.
-5 to -2	Character is severely injured with severe lasting implications. Reduce one physical characteristic by 1D. Roll 1D: 1, character loses a leg; 2, character loses an arm; 3, character loses both eyes; 4-6, the character is otherwise unharmed.
-1 to +0	Character is injured with lasting implications. Roll 1D: 1-2, character loses a hand; 3-4, character loses one eye; 5, character loses an arm; 6, reduce one physical characteristic by 2.
+1 to +5	Character is injured and suffers mild lasting injuries. Roll 1D: 1-2, character is badly scarred; 3-4, character loses 1D fingers; 5, character loses most teeth; 6, reduce one physical characteristic by 1.
+6 or more	Lightly injured. No permanent effects.

DMs: -2 if the character is a Pirate or a Scout; -1 if in a military career; +0 if civilian.

INJURY EFFECTS

Below are the effects of injury, followed by a table presenting cybernetic replacement costs.

Blinded: The character loses both eyes to injury and is blind and may not perform any task requiring sight.

Lost Arm: One of the character's arms must be amputated to save their life. The character obviously cannot use this arm for any purpose.

Lost Fingers: The character loses several fingers to injury. They suffer a DM-2 to all checks related to that specific hand.

Lost Hand: One of the character's hands must be amputated as part of medical care, though surgery saves most of the arm. The character loses all uses of the hand.

Lost Leg: One of the character's legs must be amputated to save their life. The character cannot move unaided other than by crawling. Using a crutch or a wheelchair, the character may move 3 meters per minor action.

Lost One Eye: The character is blinded in one eye but retains the other, losing depth perception and drastically reducing their field of view. The character retains vision but suffers DM-2 to all actions requiring depth perception, such as ranged attacks. The penalty should also be applied to any check related to having a full field of vision, such as noticing someone sneaking up on the character.

Lost Teeth: Most of the characters' teeth are knocked out, making eating difficult causing DM-2 to all checks involving speech.

Physical Characteristic: The character's characteristics are reduced due to lingering physiological, neurological, and psychological damage. Adjust attribute DMs accordingly.

Scarring: The character suffers extensive and lasting scars or burn marks from their injury. The character is easily recognizable and suffers DM-2 to all social checks, except for intimidation in which they enjoy DM+2.

CORRECTIVE CYBERNETICS TABLE				
INJURY	**IMPLANT OR SURGERY**	**TL**	**COST (CR)**	**CYBERNETIC POINTS**
Blindness	Pair of cybereyes	9	10000	2
Lost arm	Cyberarm	9	6000	1
Lost fingers	Cyberfingers	9	500 each	0
Lost hand	Cyberhand	9	1500	1
Lost leg	Cyberleg	9	9000	1
Lost one eye	Cybereye	9	5000	1
Lost teeth	Dental reconstruction	6	2500	0
Physical Characteristic	Therapy and internal cybernetics	9	3000/point	1/injury
Scarring	Plastic surgery	7	3000	0

Repairing Injuries

Thankfully, advanced cybernetics allow the restoration of even the worst injuries. The Corrective Cybernetics table presents corrective surgery and cybernetic options, along with their minimum tech levels and Cybernetic Points cost. See the Cybernetics section in the Equipment chapter for more information on cybernetics and Cybernetic Points.

Optional Rule: Iron Man!

For players and Referees seeking a hardcore, old-school experience, treat any Injury on the event tables during character generation as character death – requiring the generation of a new character from the start!

Stage 4: Calculate Stamina and Lifeblood

The character's Stamina represents their toughness, and their ability to take a hit and shrug it off. Stamina is equal to the sum of character's END Characteristic + Athletics skill. For example, a character with END 7 and Athletics 1 will have Stamina 8.

The character's Lifeblood represents their resistance to injury. It is equal to twice the sum of the character's END Characteristic and Athletics skill. For example, a character with END 7 and Athletics 1 will have Lifeblood 16.

If the character lacks the Athletics skill, their Stamina simply equals their END score, and their Lifeblood simply equals twice their END score.

Stage 5: Finalize the Character

Think of your character's skills, career, and events. What kind of person are they? Why did they gain a level in Carouse when they should have focused on their careers and gained that level in Admin instead? What happened during their career that made them want to seek a life out in the stars? Perhaps look at the character's career and create a narrative sketch of what their life was like. What does the character look like? How are they connected to the other Player Characters? Think of your character's personality and motivation and give them a name.

Optional Rule: Skill Limits

Some Referees and players may notice that there are plenty of opportunities to abuse the non-random nature of character generation in Cepheus Deluxe. While we would never accuse players of deliberately attempting to optimize their characters to be the best Recon/Science/Admin specialists in the galaxy, we acknowledge that these rules can produce characters with extremely high skill levels in a surprisingly narrow field. To reduce the chances of ridiculously specialized characters, we strongly suggest the following rule:

Skill Limits: Referees are well within their rights to limit Player Character skills to a maximum of level-3 in any skill. This still provides PCs with extreme advantages, especially when combined with good attribute modifiers, and Trait bonuses. If a Career Event Table roll would improve a level-3 skill to level-4, the player should increase any other skill by +1 instead.

Example Character 1: Ennik Kazzov

Josh decides to generate a scout for an upcoming Cepheus Deluxe game. Let us introduce you to Ennik Kazov, a young and curious 18-year-old from a densely populated high-tech core world. Ennik is from a lower-middle class background and is restless and curious. He likes driving his grav speeder. He is tough and steady but is rather skinny. His academic performance is only eclipsed by his natural wits. Josh selects the Capital World homeworld, and Grav Vehicle 1 as Ennik's homeworld skill. He assigns a standard characteristic array to Ennik's attributes as follows: STR 5, DEX 7, END 9, INT 10, EDU 8, SOC 6.

Josh enlists Ennik in the scouts and notes the career's five level-0 Service Skills and selects Survival 1 as the level-1 Service Skill. He then selects Recon 1 and boosts Ennik's STR by +1 to 6. Josh rolls on the Event Table, getting Exemplary Service, gaining a DM+1 on a single Benefit Roll. Using the optional rule for rolling the term length, Ennik's first term was only 1 year long. Josh considers this first term and concludes that Ennik was selected for a survey mission and was extremely valuable on the ground, gaining him a bonus.

For Ennik's second term, Josh selects Investigation 1 and Science 1, and notes that Ennik's Rank increased to 1. Ennik's Event roll indicates he spent a lot of time in Deep Space Travel and gained Zero-G 1 as he trained and performed many EVA duties during his time on a scout ship. This second term lasted 4 years.

During Ennik's third term, he gained Science 1 (total Science 2) and Investigation 1 (total Investigation 2) and had a Life Event: Improved Relationship. Ennik had a romantic relationship with a shipmate during his time as a research scout on the frontier. This term lasted 3 years, after which the relationship was put on hold, but Ennik retains a Contact.

For his fourth term, the Scouts put Ennik on planetary survey duty where he gained Survival 1 (total Survival 2) to deepen out his growing expertise as a scientific researcher. Notably, his ship was the first responder

to a distress call, and during the Rescue Mission event, Ennik had no choice but to attempt first aid on badly injured miners. One of the miners perished, and a survivor harbors a grudge because of Ennik's well-meaning, if incompetent, actions. The term lasted 1 year, and Ennik was promoted to Rank 2 in the Scouts, and finally, Josh rolls to see if Ennik suffers from the effects of Aging: an 8 – 4 = 4 means no effect.

Josh decides that Ennik will have a fifth and final term in the Scouts before becoming an adventurer. Plagued by guilt due to his insufficient training in the mining accident, Ennik trained as a first responder, and gained Medicine 1 from the Advanced Education skill table. For the term's Event, Josh rolls a 12! Ennik was highly successful and made a number of significant discoveries on multiple worlds, earning him a bonus Mustering Out Benefit, as well as a bonus skill level. Josh picks Science 1 (total Science 3). The term is two years long, and Ennik's aging roll is 9 – 5 = 4, for no aging effects.

Mustering Out: Ennik is 18 + 1 + 4 + 3 + 1 + 2 = 29 years old at the time he left the Scout Service. He has 6 Mustering Out Benefits for 5 terms of service, with a single bonus benefit from an event. One of those benefit rolls will have a DM+1 due to an event.

Josh decides that Ennik could use another skill level in Science and opts to spend one Mustering Out Benefit on promoting Ennik to Rank 3, which earns Science 1, for a total of Science 4. Since this exceeds the skill cap of level 3, Josh puts the bonus skill into Medicine, raising that skill to Medicine 2. The other six Benefits are split: two on the Cash table, and four on the Materials table. The one benefit with the DM+1 Josh assigns to a Cash roll. Ennik ends up with Cr11000, a Weapon, two Space Suit benefits, and a Scout Ship.

Josh decides that the Weapon is a trusty recoilless gyrojet pistol that many spacers carry on their ships. That is only Cr600 out of a Cr1000 benefit, so Josh spends Cr400 from the cash benefit to purchase a Smart Weapon accessory for the gyrojet pistol. Josh converts the two Space Suit benefits into a single Hostile Environment Spacesuit, which Ennik is trained to use effectively. The Referee informs Ennik that the Scout Ship will likely be the party vessel, which means that Ennik is on the hook to the Scout Service for the occasional job.

Josh must now select three Traits for Ennik. Obviously, one is going to be Scientist (Life Sciences) to reflect Ennik's experience as a planetary explorer. He also gets Rescue Specialist, because of Ennik's backstory and zero-g training. Finally, to round out the backstory, Ennik receives the Combat Medic trait.

Josh computes Ennik's Lifeblood and Stamina at (END + 0 Athletics) x2 = 18, and (END + 0 Athletics) = 9, respectively.

The Referee informs Josh that all characters may choose one skill from the Exploration Skill Package. Josh decides that Ennik had better know something about actually piloting his Scout ship, so he chooses Piloting 1. Totaling all the skill levels up, Josh sees that the total number of skills Ennik has is 13, which does not exceed his INT + EDU of 18.

Finally, Josh will have to spend some portion of the Cr10600 that Ennik has remaining from his cash benefits but is otherwise ready to play!

ENNIK KAZZOV

Ennik Kazzov: STR 6, DEX 7, END 9, INT: 10, EDU: 8, SOC:6 Age 29, Rank 3 Scout

Athletics 0, Computer 0, Drive 0, Grav Vehicle 1, Gun Combat 0, Investigation 2, Medicine 2, Melee Combat 0, Piloting 1, Recon 1, Repair 0, Science 3, Survival 2, Zero-G 1. Traits: Rescue Specialist, Scientist (Life Sciences), Combat Medic

Hostile Environment Space Suit, Scout Ship, Gyrojet Pistol with Smart Gun, Cr10600

EXAMPLE CHARACTER 2: FELIX BENARI

Josh has joined a Cepheus Deluxe game and has decided to branch out from his usual PC choice of Scout. He has settled on playing a Merchant: Felix Benari is a friendly, ambitious young man who hails from a capital world. Felix is a bit of a lovable oaf, who did not really apply himself in school. Fortunately, his family was ready to put him to work in a position where he would do the least amount of harm to anyone. Felix had other plans and joined the Merchant Marine fleet the moment he finished school. Josh chooses Carousing-1 from the Homeworld skill table and arranges Felix' attributes as follows: STR: 9 DEX: 5, END: 8, INT: 6, EDU: 7, SOC: 10.

Enlisting in the Merchants gains Felix five level-0 service skills, and Josh selects Admin-1 as a level 1 service skill to begin Felix' career bean-counting in the stars. Felix also receives two skills from the Service or Specialist skill tables: Liaison-1 and Gun Combat-1. The roll on the event table gives 11: Xenomorphs! Josh throws Gun Combat for 10 + 1 (Gun Combat skill) = 11, and make it through the ordeal without injury, gaining Survive-1 in the process. Lastly, the term is 1D = 3 years long. Josh considers that this traumatic event happened on a backwater planet and that Felix was the sole survivor of his crew. This scarred him deeply and changed his outlook on life.

For the second term, Felix continues in the Merchants, and gains Streetwise-1, and increases Liaison by 1 to Liaison-2. Felix is also promoted automatically to Rank 1, and gains Leadership-1. The Event table roll is 7, a Life Event: Travel. Felix gains Steward-1 as he spends

1D = 4 years in space. After the xenomorph attack, Felix wandered, using his social graces and growing interpersonal skills to move from place to place, and crew to crew.

To start the third term in the Merchants Josh decides that Felix will take some online courses while he's in space and increases EDU to 8. He also increases Carousing to level 2. The Event roll is 8: Legal Trouble. The throw to avoid prison is 4 + 1 (Admin skill) = 5. Felix is prison-bound, after 1D = 1 years for the third term. Felix was caught skimming supplies and funds from the ships he was serving on, and he did not anticipate being caught.

The fourth term is a prison term, and Josh chooses Deception-1 as a skill. The Prison Event is 11: Experimentation. Josh throws END and gets 8! This gains Felix the Hard to Kill trait for free! The term length is 1D = 5 years long. Felix also has to make an aging roll at the end of this term: 5 – 4 (Number of terms) = 1, no aging effect. Prison was a horror show for Felix. On a remote prison planet, a corporate program took him in and abused him physically and psychologically. But Felix did not break. After five years of torture, he was released, tougher than ever.

Josh decides that Felix needs to return to the Merchants for one final term. Since Felix now has EDU 8, he qualifies for Advanced Education skills. He selects a Language, and Josh reminds himself to ask the Referee which languages are available in the setting. Felix is also automatically promoted to Rank 2. This would have normally happened in the 4th term, but Felix was in prison. The Event table roll yields Felix some Risky Business. Josh wagers 3 Benefit rolls and throws Admin: 7 + 1 (Skill Level) = 8, which is just enough to succeed. That gains Felix 2 additional Benefit rolls. Josh must roll for Aging: 6 – 5 = 1, or no effect. Finally, Felix stays in this term for 1D = 6 years. At this point, Felix could not return to the Merchant Marines, so he signed on as a Steward/Purser on a free trader crew on the frontier. He picked up some languages and ran some extremely risky deals that paid off big time. With the proceeds of his scores in hand, Felix decided it was time to strike out on his own again.

Mustering Out: Felix has 6 – 1 (Prison Term does not count towards accumulating Benefits) + 2 (Risky Business) = 7 Mustering Out Benefit rolls after 5 terms of character generation. Josh decides to roll 2 Cash Benefits and throws Carouse/SOC 10+ twice to attempt to gain a DM+1 on each Cash Benefit: 6 + 1 (Carouse skill) = 7, and 9 + 1 (Carouse skill) = 10, a success. The first roll has DM-1: 3 – 1 = 2 or Cr10000, and the second is 6 + 1 = 7, or Cr50000 (use the highest result on the table). That's a total of Cr60000 for starting cash.

Felix will use two Benefit Rolls as promotions, gaining him Rank 4. This grants Pilot-1, and two additional skill levels. Josh raises Deception to level 2 and adds Melee Combat-1. With the three remaining Benefit Rolls, Josh rolls on the Material Benefits table: Low Passage, Contact, and High Passage.

The Referee informs Josh that PCs may gain one skill from the Trading Skill Package. Josh selects Steward-1, raising Felix' Steward skill to level 2.

Felix is 3 + 4 + 1 + 5 + 6 = 37 years old. Josh purchases the character some Synthsilk Armor, an Internal Storage Pouch, and Internal OmniComp cybernetics. Felix will also have lockpicks, and a Laser Pistol with Smart and Secure Weapon modifications. He also purchases a cutlass, because that's what any self-respecting veteran of the Merchant Marines would have. The equipment totals Cr10200.

Finally, Felix has the Hard to Kill trait from his Prison term, and receives three other traits: Diplomat, Sleight of Hand, and Trash Talk. Josh also calculates Felix's Lifeblood and Stamina at (END + 0 Athletics) x2 + 5 (Hard to Kill) = 21, and (END + 0 Athletics) = 8, respectively.

Felix Benari

Felix Benari: STR: 9 DEX: 5 END: 8 INT: 6 EDU: 8 SOC: 10 Age 37, Rank 4 (Second Officer) Merchant

Admin 1, Carousing 2, Deception 2, Gun Combat 1, Leadership 1, Liaison 2, Melee Combat 1, Pilot 1, Steward 2, Streetwise 2, Survival 1, Zero-G 0. Traits: Hard to Kill, Diplomat, Sleight of Hand, Trash Talk

Cybernetics: Internal OmniComp, Storage Pouch

Synthsilk Armor (AR12), Lockpicks, Laser Pistol (Smart Weapon, Secure Weapon), Cutlass.

Felix is a colorful character with a storied, checkered, past filled with some questionable choices. He has survived a xenomorph attack, been to prison, seen the galaxy, and made some impressively risky investments that paid off. He has some shady, albeit extremely useful, people skills that he would never ever use for his own benefit. His plans and schemes don't always work out, but when they do Felix knows how to leverage and embellish them.

Example Character 3 Amelia Trivedi

The head lizard at Stellagama Publishing has informed the Cepheus Deluxe author responsible for character generation examples that one more example is required. Amelia Trivedi is a smart, tough, and very rough-around-the-edges woman used to living on the fringes of society: STR: 7 DEX: 8 END: 9 INT: 10 EDU: 6 SOC: 5. Amelia is a denizen of an inhospitable outpost world, and Josh selects Zero-G 1 as Amelia's homeworld skill.

Josh has decided to roll randomly for careers using a non-standard D12 and gets Belter. He notes Amelia's

level-0 Service Skills and raises Demolitions to level 1. He then adds Engineering 1, and Jack o' Trades 1. Amelia's first term Event is dealing with a Protection Racket. Josh elects to resist the racket, and throws Melee Combat: 10, a success! This gains Amelia Streetwise 1, and an Enemy pirate. Josh considers that this would be perfectly in line with Amelia's rough life and will consider generating the NPC pirate enemy later. Amelia's first term is 1D = 5 terms long.

For Amelia's second term, she increases Jack o' Trades to level 2, and adds Melee Combat 1. Amelia is automatically promoted to Rank 1, which gives no bonus skill. The Event table roll results in a company investing heavily in Amelia's mining operation. Josh throws Admin 8+ and gets a 12. This nets Amelia a bonus Benefit roll later. The second term is 1D = 2 years long. This is a brief, but very prosperous time in Amelia's life: she capitalized on her grit and competency and earned a great deal of money.

Josh decides that Amelia will have a third and final term. He increases Engineering and Demolitions to level 2. The Event roll is 4: an Explosion. The Zero-G throw is 7 + 1 (Zero-G skill level) = 8, which is a success. This gains Amelia another level in Demolitions, bringing it to level 3. This term lasts 1D = 1 year. Josh decides that the mining accident cuts short Amelia's belting career: she lost crew in the explosion, and has decided to take her earnings and expertise, and try something doing something else, hopefully less immediately dangerous.

Mustering Out: Amelia has 4 + 1 (Event) = 5 Mustering Out benefit rolls. She rolls once on the Cash Benefits table, getting Cr5000. She spends two on promotions, which increase her rank to 3, or Foreman. Josh adds two skill levels: Gun Combat 1 and increases Repair to level 1. The remaining two rolls are for the Material benefits table, which gain Amelia +1 INT, and a Space Suit.

Amelia is 18 + 5 + 2 + 1 = 26 years old.

Amelia has a Space Suit, and purchases an Internal Omnicomm cybernetic, a pack of corrosive gel, firestarters, hooligan tool, Omnitool, Pulverizer, and a Tech Toolkit. For weapons, she buys a Stun Prod and a gyrojet pistol with three clips. Finally, she purchases four EMP grenades, four incendiary grenades, and two blocks of Plastique. She has Cr2820 remaining.

Josh selects Stealth 1 from the Criminal Skill Package. He then selects two traits for Amelia: Explosives Expert (of course) and Berserker.

AMELIA TRIVEDI

Amelia Trivedi: STR: 7 DEX: 8 END: 9 INT: 10 EDU: 6 SOC: 5, Age: 26 Belter Rank 3 (Foreman)

Athletics 0, Computers 0, Demolitions 3, Engineering 2, Gun Combat 1, Jack o' Trades 2, Melee Combat 1, Pilot 0, Repair 1, Stealth 1, Streetwise 1, Zero-G 1. Berserker, Explosives Expert.

Cybernetics: Internal Omnicom

Corrosive Gel, Firestarters, Hooligan Tool, Omnitool, Pulveriser, Tech Toolkit. Stun Prod, Gyrojet Pistol (3 clips), 4 EMP Grenades, 4 Incendiary Grenades, 2 blocks of Plastique. Cr2770

Amelia is a rough belter who you might think is a liability in situations where blowing things up, or fixing things up, is not required. However, she is surprisingly quick on her feet, has cross-trained in everything, and has experience in things that belie her 26 years. What she lacks in specifics she makes up for in wits and determination. She is a terror in close combat, preferring a Hooligan Tool or Pulverizer over a blade.

TRAITS

Traits are unique features of competent and driven characters, such as player characters. Each character typically has one Trait, though, rarely, particularly experienced and determined characters may have two or even three Traits. Each Trait has a simple Prerequisite, and an effect, which often utilizes an Advantage throw – in which you throw 3D and pick the highest 2 for the throw result.

SKILL-RELATED TRAITS

ACROBAT

Prerequisite: Athletics 2
Roll with Advantage whenever the character performs high-flying feats of athletics: swinging from ropes, running (not walking) across wires, or leaping from rooftop to rooftop.

ANIMAL AFFINITY

Prerequisite: None
Roll with Advantage whenever the character has to interact with animals. The character can opt to have a small pet that understands basic commands.

AWARENESS

Prerequisite: INT 9+
The character has sharp senses and is difficult to surprise. When rolling the Recon skill to avoid surprise (even unskilled), the character throws with Advantage. Note that this does not work when the character is setting up a deliberate ambush; the Hunter Trait covers that instead.

BORN ATHLETE

Prerequisite: None
The character is a natural talent. Choose one physical attribute. Make all Athletics tests with that attribute with Advantage.

COMBAT MEDIC

Prerequisite: Medicine 1
The character is trained in combat medicine and capable of bringing wounded comrades back to fighting condition. As an action in combat, the combat medic may throw Medicine 6+ to immediately revive an unconscious character with Minor Wounds. The revived character will still be wounded, as usual for an awakened character with Minor Wounds, and will be prone, but will be able to act in the following combat round

EXPLOSIVES EXPERT

Prerequisite: Demolitions 1
The character knows how to effectively set up, or throw, explosives and grenades. Add 1D to the damage of all explosives and grenades used by the character. When arming or disarming explosives, roll Demolitions with Advantage.

GHOST

Prerequisite: Stealth 1
The character is an expert in using one specific terrain type to their advantage. When sneaking in that terrain condition, they throw with Advantage. The possible terrain types might include Forest, Jungle, Urban, Desert, Shipboard, Swamp, etc. The terrain should be quite specific.

HACKER

Prerequisite: Computer 1
The character is an accomplished hacker who dares to challenge even the most perfect, immortal machine. When trying to break into a secure computer system or when picking an electronic lock (or similar device), the hacker throws with Advantage.

HUNTER

Prerequisite: Recon 1
The character is an expert in ambushing prey, both animal and sentient. When making a Surprise throw when attempting an ambush, the hunter throws with Advantage.

JUICE

Prerequisite: Repair 1 or Engineering 1
Once per session you can push a piece of tech to exceed one of its performance boundaries. For example, sensors or weapons get an extra step of distance to their range; you may reroll a weapon's damage dice and take the better result; you get a second attempt to open a lock with your tools.

LEGAL EAGLE

Prerequisite: Admin 1
The character is well-versed in legal codes and can quote appropriate legislation and civil regulations. The

character throws Admin with Advantage when dealing with legal matters and procedures.

Machine Whisperer

Prerequisite: Jack o' Trades 1
Once per session you can spend 1D3x10 minutes to create 1D tools or weapons of the baseline tech level of the planet or place you find yourself in.

Master Tracker

Prerequisite: Survival 1
This character gains Advantage when tracking in a wilderness environment. This trait does not apply in urban or other built-up areas.

Merchant

Prerequisite: Liaison 1
When haggling over prices, roll with Advantage. This Trait applies to the Speculative Trade table roll as well.

Palmgreaser

Prerequisite: Admin 1
The character is able to spot a corrupt official a kilometer away and knows how to offer a bribe discreetly and inoffensively. Admin tasks when bribes are used are rolled with Advantage.

Parkour

Prerequisite: Athletics 1
The character is very adept at bypassing or avoiding obstacles while running at top speeds. All Athletics tests made during chases, as either pursuer or quarry, are made with Advantage.

Proper Etiquette

Prerequisite: Liaison 1
The character knows the intricacies and rules of very formal social settings, such as Diplomatic Meetings, High Level Business Dealings, and the like. The character gains Advantage on tests made when operating under very formal social rules.

Rescue Specialist

Prerequisite: Zero-G 1
The character is good at getting at people who are in danger while in zero gravity conditions. Gain Advantage when rolling to avoid damage in space suits during rescue operations, or to help a victim of a space-disaster get medical attention.

Runner

Prerequisite: Athletics 1.
The character walks and runs very quickly. The character's movement rate is increased by 1D meters per combat action.

Scientist

Prerequisite: Science 1
The character is an expert in a specific field of science. Pick one field of science: Life Sciences, Physical Sciences, Social Sciences, or Space Sciences. When making a throw related to that science, the scientist throws with Advantage. You may choose this Trait multiple times, each time gaining expertise in a different field of science.

Sleight of Hand

Prerequisite: Deception 1
The character is a practiced expert at magic tricks, palming, and legerdemain misdirection. When using the Deception skill in this manner, roll with Advantage.

Smuggler

Prerequisite: Streetwise 1
The character is an expert in trafficking illicit goods. When the Referee throws above a given world's Law Level to determine if the character has a legal encounter (see the Social Encounters chapter), throw 3D and pick the highest two dice.

Furthermore, when trading in illegal goods, the smuggler throws with Advantage on the modified price table and picks the most beneficial dice (the lowest two when buying and the highest two when selling).

Surgeon

Prerequisite: Medicine 1
The character is a specialized surgeon. When treating a seriously wounded character, the surgeon may throw Medicine 6+ to reduce recovery time from 5D days to 2D days. If using the Trauma Surgery rules, the surgeon throws with Advantage when throwing for such a surgery.

Thief

Prerequisite: Deception 1 or Streetwise 1
The character is specialized in stealing goods, then selling them on the black market. When pickpocketing or stealing an item, or when attempting to sell stolen goods, the thief throws with Advantage.

Throwing Arm

Prerequisite: STR 9+
The character is especially adept at throwing grenades and other thrown weapons. Effective range for the character's grenades and other thrown weapons in meters becomes STRx3, and maximum range becomes STRx5.

Tradecraft

Prerequisite: Investigation 1 or Streetwise 1
The character is skilled in surveillance and counter-surveillance techniques, tailing targets, setting up dead drops, and ensuring that they are not being spied upon. When using Investigation or Streetwise in this manner, roll with Advantage.

Gun Combat Traits

Crack Shot

Prerequisite: Gun Combat 2, and one other Gun Combat Trait
Pick one type of firearm category: semi-automatic pistols, revolvers, etc., and gain a +1D damage bonus when using them.

Defeat Armor

Prerequisite: Gun Combat 1
The character knows how to pick weak spots in the enemy's armor from a distance. When firing an aimed shot, if the to-hit throw's Effect is +6 or better, ignore the target's armor.

Gunslinger

Prerequisite: Gun Combat 2
The character is a master of handguns and can perform amazing feats of arms with them. When a shot fired by the character from a semiautomatic handgun "drops" an enemy (causes them to fall unconscious or die), the character may immediately attack a second enemy with the same handgun. The character can only attack one additional enemy per combat round.

Rapid Reaction

Prerequisite: Gun Combat 1
The character has a quick finger on the trigger and reacts quickly to enemy movement. If an Overwatch shot fired by the character hits its target, the character remains in Overwatch and may react one more time in that round to enemy movement. This can be done only once per round (that is, up to two Overwatch shots per round). The Overwatch ends after the second attack.

Signature Weapon

Prerequisite: Gun Combat 1
The character is particularly proficient in using a specific weapon. Choose one specific weapon, such as your service revolver, the family hunting rifle, the laser pistol you pried from that alien's cold, dead tentacles, etc.; when attacking with that specific weapon, the character gains Advantage. Note that this trait does not apply to a class of weapons (pistols), nor to a model of weapon (Colt .45s), but to a specific weapon the character owns (the custom pearl handled Colt .45 the character's grandfather gave to him upon entering the Space Marines). If the weapon is lost or destroyed, you can adapt to a new weapon of the same type by training with it for a month. You can have only one signature weapon at any given time.

Sniper

Prerequisite: Gun Combat 1
The character knows how to kill unsuspecting victims from a distance. When attacking an unaware target at range, using an aimed shot, add 1D to the attack's damage. This bonus can only be applied outside of active combat.

Spray n' Pray

Prerequisite: Gun Combat 1
The character knows how to maximize the effect of automatic fire. When using an automatic weapon, treat its Auto rating as one point higher.

Melee Combat Traits

Armor Breaker

Prerequisite: Melee Combat 1
The character knows how to hit weak spots in the enemy's armor in melee combat. When attacking in melee, if the to-hit throw's Effect is +6 or better, ignore the target's armor.

Backstab

Prerequisite: Melee Combat 1 and Stealth 1
The character knows how to deliver a lethal blow to an unsuspecting victim. When attacking an unaware target in melee, attack with Advantage and add 1D to the attack's damage.

Blind Fighting

Prerequisite: Melee Combat 1
The character knows how to fight in darkness, using senses other than sight. When fighting in melee combat, the character suffers no negative DM to hit for fighting in dim light and only DM-1 for fighting in darkness

Grappler

Prerequisite: Melee Combat 1
The character gains Advantage when attempting to grapple foes.

Martial Artist

Prerequisite: Melee Combat 1
The character is lethal in unarmed combat and can cause serious harm even without possessing significant physical might. When making an unarmed attack, the character's damage increases to 1D+STR DM rather than the regular STR DM.

Legendary Charge

Prerequisite: Melee Combat 1
If you perform a Charge, on a successful hit your attack does double damage.

Signature Weapon

Prerequisite: Melee Weapon 1
The character is particularly proficient in using a specific weapon. Choose one specific weapon, such as a family heirloom sword, a dagger won as a war trophy, etc.; when attacking with that specific weapon, the character gains Advantage. Note that this trait does not apply to a class of weapons (swords), nor to a model of weapon (long swords), but to a specific weapon the character owns (Excalibur). If the weapon is lost or destroyed, you can adapt to a new weapon of the same type by training with it for a month. You can have only one signature weapon at any given time.

Berserker

Prerequisite: END 9+, Melee Combat-1
Whenever a character with this trait kills or disables an enemy in melee combat, they may then move 2m and immediately attack an adjacent enemy. Berserkers may do this in the same combat action for a number of times equal to their Melee Combat skill.

Close Quarters Combatant

Prerequisite: Gun Combat 1 and Melee Combat 1
The character does not suffer any penalties when using pistols and other one-handed firearms in melee combat. Two-handed ranged weapons can still only be used as clubs.

Combat Readiness

Prerequisite: DEX 10+
The character is quick to act and react in combat. Gain Advantage to all Initiative throws. If the character does not have the Tactics skill, they still roll Initiative unskilled.

Commander

Prerequisite: Leadership 1
Once per combat, as a free action, make a Leadership/SOC 8+ test. You grant an ally who can receive orders from you a free Action. This can apply to characters in different vehicles–as long as they are able to receive orders from the Commander.

Danger Sense

Prerequisite: INT 9+
The character instinctively senses danger and can try to evade enemy attacks even when unaware of the assailant. If you are using the Dodge and Parry optional rules, and the character is attacked by an enemy the character is unaware of, throw DEX 8+; if successful, the character uses the Dodge or Parry bonus despite being unaware of the attacker or Surprised.

Favored Enemy

Prerequisite: None
The character is particularly skilled or vicious when battling one specific enemy. This could be a specific alien life form, robots, soldiers of a given nationality, pirates, or the like. The choice should be broad enough to be applicable, but not too broad as to be abused. The character gains +1D to all damage rolls against this enemy.

Hard to Kill

Prerequisite: None
The character gains 5 additional Lifeblood points. This trait can be taken multiple times.

HARDY

Prerequisite: None
The character is particularly tough and resistant to injury. Add 5 to Stamina. This trait can be taken multiple times. Note that this Stamina bonus does not increase the character's Lifeblood

HIGH ENERGY PHYSICS

Prerequisite: Gunnery 1
The character is good at putting shots on target. Once per battle, roll damage twice and take the best result.

INSPIRATIONAL

Prerequisite: Leadership 1
The character is a shining example for others and knows how to motivate them. When rolling to Inspire or Support Crew in combat, gain Advantage

KNOWS THE TERRAIN

Prerequisite: Tactics 1
The character is an expert in tactical planning and execution in a given environment. Pick a terrain type. Make all tactics throws with Advantage when in that terrain type. The terrain types include, but are not limited to urban, woodlands, jungle, surface navy, submarine, space, etc. The terrain chosen must be specific.

LOW PROFILE

Prerequisite: None
The character knows how to utilize cover very effectively. When the character is behind hard cover, treat that as heavy cover (DM-3 to hit the character).

RALLY

Prerequisite: Leadership 2
Once per combat, the character can use their action to rally their companions. Allies immediately heal 2D Stamina, and for the next two rounds NPC allies get Advantage on all Morale tests. If the character's allies have already failed a Morale test and have begun a Fighting Withdrawal or Retreat, the Rally action gives them another Morale test. If they recover their will to fight, they gain the usual benefits of this trait.

SHAKE IT OFF

Prerequisite: None
Once per combat, you can take no Actions for an entire turn and regain 2D Stamina.

VIGILANT

Prerequisite: INT 9+
The character is always on the move, and on the lookout for trouble. If the character used both actions in a combat round for movement, they automatically enter Overwatch mode without requiring a further action. This Trait is not cumulative with cybernetics or pharmaceuticals providing similar effects or granting additional actions.

WEAPON HANDLING

Prerequisite: Heavy Weapons 1
The character proficiently handles heavy weapons despite their bulk. The character suffers no penalty for using Bulky weapons, regardless of STR.

VEHICLE AND SPACECRAFT TRAITS

ACE

Prerequisite: Relevant Vehicle Skill 1, or Piloting 1
The character is a gifted expert at maneuvering with a specific vehicle and can easily outmaneuver others to gain great advantage over them in combat. When throwing for a Position in a vehicle chase or battle using the vehicle skill the Ace trait applies to, throw with 2D and take the higher result. Note that an Ace in the Piloting skill would not be an Ace Driver, or Ace Grav Pilot.

Each Vehicle skill and the Piloting skill has a separate Ace trait. Being an ace in multiple vehicles requires taking this trait multiple times. In starships (or other large, crewed vehicles) either the Pilot's or Captain's Ace trait may apply. In small craft under 100 tons, the only the ship's Pilot can benefit from the Ace trait.

EASY RIDER

Prerequisite: Animals 1
The character is well-trained in riding animals, Terran and alien beasts alike. When making a throw related to riding an animal, including when rolling for a Position in a chase, the rider throws with Advantage.

JUMP INTUITION

Prerequisite: Piloting 1
The character has a natural – or perhaps supernatural – knack for navigating Jump Space. Roll with Advantage when making a Jump throw.

MASK ENGINE

Prerequisite: Engineering 1
The engineer has developed techniques to make it more difficult to detect their ship. Roll Engineering 10+ and apply the Effect as a penalty for scanning vessels to detect this ship.

MIRACLE WORKER

Prerequisite: Engineering 1
The character is trained and experienced in performing fast and temporary repairs on starships. When throwing to attempt a Damage Control action, the mechanic throws with Advantage3D and picks the highest two.

MR. FIX-IT

Prerequisite: Repair 1
The character is trained and experienced in performing fast and temporary repairs on vehicles. When throwing to attempt a jury-rig repair on a vehicle system, the mechanic throws with Advantage.

POINT DEFENDER

Prerequisite: Gunnery 1
The character is very skilled at destroying incoming missiles, and gains a +1DM+1 to all rolls when engaging in the Point Defense Action—thus, the first point defense attempt would be at +1DM+1, the second at 0DM+0, the third at -1DM-1, etc.

SENSOR ACE

Prerequisite: Computer 1
When using ship sensors to spoof missiles, jam enemy sensors, or to perform a scan for vessels, roll with Advantage.

SIGNATURE VEHICLE

Prerequisite: Relevant Vehicle Skill 1, or Pilot 1
The character gains a DM+1 for all vehicle rolls for a specific named vehicle. Note that this trait does not apply to a class of vehicles (for example, "boats" with Watercraft), nor to a specific kind of vehicle (submarines) but to a specific vehicle the character uses (Orange October).

STARSHIP

Prerequisite: None.
The character has inherited, won by gambling, loaned, or otherwise received a share in a starship. You may take this Trait multiple times. The first time you take it, you receive a 200-ton Free Trader, a 100-ton mining vessel, a 100-ton Scout, or a 200-ton Research Vessel, with forty years' worth of full mortgage payments remaining. Each additional time you take this Trait, increase the ship's age by a decade and reduce the mortgage payments by one decade as well.

Taking this Trait five times means owning a ship outright, but it will be a 40-year-old antique. If the character already has the Starship trait, and musters out with a Trader, Scout, or Research vessel, count that Mustering Out Benefit as if they had taken the Starship trait again. For example, a Scout picks the Starship trait, and then receives two Scout Mustering Out Benefits. Instead of having a Scout on loan from the Scout Service, the character owns a 20-year-old Scout starship with 20 years of the mortgage already paid off.

STUNT DRIVER

Prerequisite: Relevant Vehicle Skill 1
The character has a flair for handling vehicles in situations that were well outside the engineering team's parameters when the vehicle was in the design and testing phase. Whenever the character is performing stunts like flying aircraft into tunnels, driving motorcycles down flights of stairs, or even jumping cars off ramps and over ravines, throw the relevant vehicle skill with Advantage.

OTHER TRAITS

ARTISTIC

Prerequisite: None
The character is naturally gifted in artistic endeavors. Gain Advantage when rolling where artistic talent is relevant.

ATTRACTIVE

Prerequisite: None
Roll checks with Advantage in situations where good looks might be important.

CODEBREAKER

Prerequisite: EDU 9+
When attempting to decipher codes and break encryptions, roll with Advantage. This trait can also be applied to languages in which the character is not fluent.

CONTACTS

Prerequisite: None
The character has highly useful connections. Gain 1D3+1 Contacts (see the Character Generation chapter).

CYBORG COMPATIBILITY

Prerequisite: None
The character is highly receptive to cybernetics. The cyborg gains three Cybernetic Points.

DIPLOMAT

Prerequisite: None
When the Referee rolls for NPC Reactions to this character specifically, they should roll twice and take the more favorable result.

EIDETIC MEMORY

Prerequisite: None
The character's recall is incredible. When rolling to remember detailed information, gain Advantage.

EMPATH

Prerequisite: None
The character, while not being a "true" psion (unless otherwise trained), possesses "passive" empathy allowing them to easily read another person's emotions. Whenever trying to determine an NPC's emotional state, or find out if an NPC is lying, the empath has Advantage. This also applies to games of chance and bluffing, such as poker, where reading an opponent is a central aspect to the game.

EVASION

Prerequisite: DEX 9+
With this trait, diving for cover does not take up your next action.

EXPLORER'S SOCIETY

Prerequisite: None
The character receives membership in the exclusive Explorer's Society. Membership grants a free high passage ticket for one parsec every two months and free stay at Society hostels in most starports.

FAST HEALING

Prerequisite: END 9+
The character recovers on their own from a Minor Wound within 1D hours (rather than a day) in the absence of treatment, and from a serious wound within 3D days of medical care. This is not cumulative with the increased rate of healing when successfully treated by a Surgeon (see below).

IMMUNITY

Prerequisite: None
The character is particularly resistant to toxins and pathogens. When making a throw to resist poison or disease, the character throws with Advantage. When a medic treats this character with Medicinal or Panacea pharmaceuticals, they also gain Advantage.

INTIMIDATING

Prerequisite: None
You just look scary, or you can manifest scariness when you want to. Roll with Advantage on any tests when intimidating people into giving you information or complying with your requests.

IRON LIVER

Prerequisite: None
For whatever reason, the character has a high tolerance for alcohol. When rolling to drink someone under the table, roll with Advantage.

LANGUAGES

Prerequisite: None
The character is fluent in three additional languages.

LATENT PSION

Prerequisite: None
The character has untrained psionic abilities. See the Psionics chapter. Untrained, the character has 1 PSI point and one of the following powers: Enhanced Characteristic, Sense, Lift 1 gram, Life Detection, or Blink. The PSI point regenerates after a night's sleep, as usual. Psionic drugs affect the character as usual and allow more frequent use of their powers.

Actual psionic training allows the character to roll a normal PSI characteristic and additional powers. See the Psionics chapter for more details. Characters who take this trait twice are considered full Psions and should use the rules presented in the Psionics chapter to determine their abilities.

LUCKY

Prerequisite: None; only in games using the optional Hero Points rules.

Your character starts each game session with 3, rather than 2, Hero Points.

Navigator

Prerequisite: Survival 1
When throwing to navigate a course on a world (land, sea, or air) or to call in fire support, throw with Advantage.

Packrat

Prerequisite: None
The character knows how to pack and carry equipment efficiently. The packrat is unencumbered when carrying up to twice their STR in items. The character is Heavily Loaded when carrying up to four times their STR in items. Note that this recalculation of encumbrance limits should not include the STR attribute DM.

Radiation Resistant

Prerequisite: END 9+
The character has higher than usual tolerance for radiation. The character only receives 75 per cent of rads from radiation exposure. Round fractions down.

Scavenger King

Prerequisite: None.
The character is extremely talented at finding parts, gear, weapons, or about anything that the group could need, in a pinch. When using a skill to scavenge or scrounge equipment, roll with Advantage.

Spot Weakness

Prerequisite: none
If the character spends a full minute observing a target, they can spot its weakness with a successful INT 8+ test. All damage rolls should be rolled twice, and the higher result taken. Note that this does work for ship combat, only substitute a Computer/INT 8+ test, modified by the vessel's computer DM, instead of an INT test.

Strong-Willed

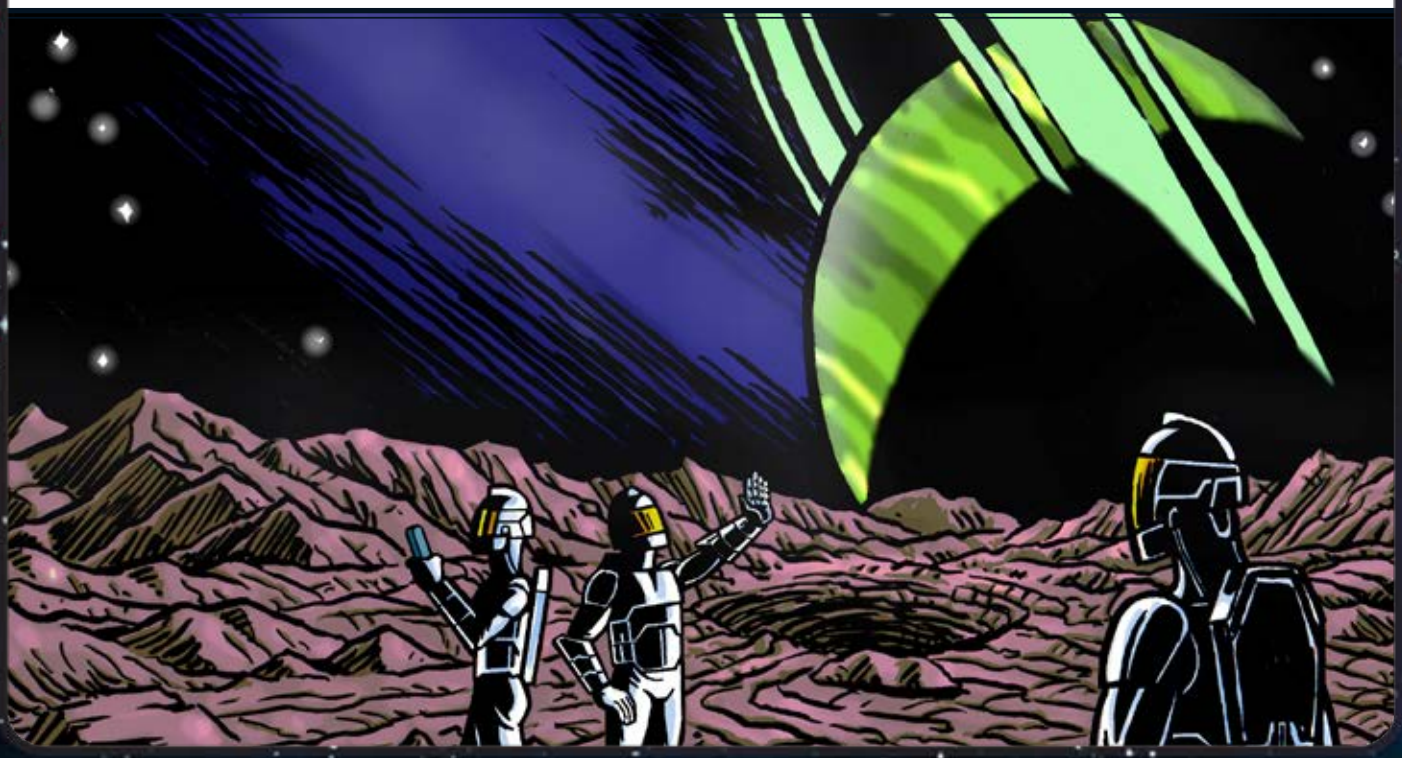
Prerequisite: None
This character gains Advantage when being threatened, intimidated, or coerced. This trait also applies to any rolls to resist Psychic domination.

Trash Talk

Prerequisite: Carousing 1 or Deception 1
As a free action in a battle, you can attempt a Carousing or Deception test to draw the attention of an enemy nearby or closer to yourself, causing them to attack only you on their next turn.

Will to Live

Prerequisite: END 9+
When using the Trauma Surgery rules, throw with Advantage when throwing for Trauma Surgery. This trait applies even if the attending physician or autodoc does not have the Surgeon Trait.



EQUIPMENT

This chapter describes some of the more common items found in an interstellar space opera setting. All prices are in Credits (Cr), the interstellar currency. Thousands of Credits are noted as KCr, and millions of Credits are noted as MCr. A Credit is a futuristic currency roughly equivalent to $3 USD in 2021CE currency.

ENCUMBRANCE

To facilitate fast play, Cepheus Deluxe avoids the careful accounting of equipment by weight. Instead, a character may carry a number of major "items" equal to 7 plus their STR DM with no penalty. This represents a Light Load. Characters may carry items beyond this, up to three times the base amount, which constitutes a Heavy Load. A heavily loaded character suffers DM-2 to all physical task throws and can only use a maximum of one move action in a combat round.

An "item" is anything of significant size: a gun, a medkit, a standard length of rope. Larger items may count as more than one item as noted in their description. Small items, such as a compass, a needle, or a candle, do not count as items, subject to the Referee's judgment.

TECH LEVELS

Cepheus Deluxe assumes an interstellar society – as befitting a space opera game. However, not all worlds in such a universe possess the same level of technological development, particularly in frontier or post-apocalyptic settings. Furthermore, Referees may want to choose between grittier, nearer-future interstellar sci-fi and no-holds-barred far-future galactic space-opera. For this purpose, Cepheus Deluxe ranks civilizations according to 17 tech levels, from 0 to 16.

TECH LEVEL CHARACTERISTICS

TL	NOTABLE CHARACTERISTICS	HISTORICAL COMPARISON
0	No technology, equivalent to the Stone age. Fire, agriculture, and stone tools.	Agricultural revolution, Stonehenge
1	Bronze or Iron age technology. Writing and mathematics.	Ancient Egypt, Classical Greece, Rome, and China.
2	Late Medieval technology. Simple black-powder firearms, ocean-going vessels	Renaissance Europe, early colonial America
3	Mass production allows for product standardization, heralding the beginnings of industrial revolution and steam power.	Great Britain circa 1800
4	The transition to industrialization is complete, bringing plastics, radio, and other such inventions.	Western Europe circa 1900
5	Widespread electrification, telecommunications, and internal combustion engines.	The First and Second World Wars
6	Development of fission power and more advanced computing.	Early Cold War
7	Can reach orbit reliably and has telecommunications satellites.	We are here
8	Possible to reach other worlds in the same system, although terraforming or full colonization is not within the culture's capacity.	
9	Development of crude gravity manipulation and controlled nuclear fusion, which makes space travel vastly safer and faster; first steps into Jump Drive technology. The advent of a wide range of cybernetics.	
10	Development of gravitic vehicles revolutionizes transportation and warfare.	
11	The first primitive (non-creative) artificial intelligences become possible in the form of "low autonomous" interfaces, as computers begin to model synaptic networks.	
12	Weather control revolutionizes terraforming and agriculture.	
13	Powered Armor appears on the battlefield in response to new weapons. "High autonomous" interfaces allow computers to become self-actuating and self-teaching. Gravitics become capable of small-scale manipulation of matter.	
14	Fusion tools and weapons become man-portable.	
15	The development of longevity treatments means that the human lifespan is now vastly increased.	
16	Handheld plasma weapons and energy shields revolutionize warfare.	

We present some rough historical comparisons with our own world to assist Referees and players in their understanding of tech levels. However, these comparisons should not imply that your own game must follow the same technological development.

LIVING EXPENSES

Characters not embarked on a starship must pay for lodging and food. The following table provides costs of living. One column shows a monthly cost of living – assuming long-term purchase of lodging and groceries. The second shows daily living, whenever characters or tourists pay for a motel or hotel room and buy prepared food. These costs include various expenses such as taxes and transportation. Characters should pay according to the quality-of-life representative of their SOC characteristic. Upper class characters living in squalor suffer penalties, as noted below.

Starvation living means living in the streets, in a tent, or outdoors and eating just barely enough to keep the character alive. Clothes are basic and always second-hand or worn out. Healthcare, entertainment, and transportation are not included in this level. A character living at starvation levels is always Fatigued.

Subsistence living is the bare minimum for civilized life – a tiny apartment, shanty, or capsule in a "coffin hotel" and simple food and clothing. Subsistence level living includes public transit, minimal entertainment, and inadequate healthcare.

LIVING EXPENSES TABLE

QUALITY OF LIVING	MONTHLY COST	DAILY COST
Starvation (SOC 0-2)	Cr200	Cr8
Subsistence (SOC 3-5)	Cr500	Cr25
Ordinary (SOC 6-8)	Cr1000	Cr50
High (SOC 9-B)	Cr5000	Cr300
Elite (SOC C-F)	Cr15000	Cr1000

Ordinary living is how most people live in city centers: an apartment, public transit or a small personal vehicle, reasonable food and clothing, reasonable entertainment, and modern healthcare.

High living is the good life: a fancy apartment in the city or a small house, eating at restaurants for most meals, a good personal vehicle, partying on a regular basis, fashionable clothes, and good healthcare.

The Elite life means living like royalty: a mansion or penthouse, regular feasts, or upscale restaurants, dressing in the finest clothes, and maintaining a

PERSONAL ARMOR TABLE

ARMOR	ARMOR RATING	TECH LEVEL	COST	ENCUMBRANCE	SKILL REQUIRED
CIVILIAN/PARAMILITARY ARMOR					
Leather jacket	2	1	Cr50	1	-
Heavy duster	3	6	Cr75	1	-
Bulletproof vest	4	7	Cr150	1	-
Reflector armor	10	10	Cr1500	1	-
Synthsilk armor	8	12	Cr6000	0	-
Energy shield	Special	16	Cr20000	1	-
Utility Suits					
Envirosuit	3	7	Cr700	2	-
Space suit	6	7	Cr2000	2	Zero-G 0
Space suit, advanced	6	9	Cr4000	0	-
Space suit, hostile environment	10	12	Cr10000	4	Zero-G 1
Envirosuit, advanced	5	12	Cr5000	0	-
COMBAT ARMORS					
Heavy ballistic cloth	6	7	Cr250	2	-
Encased armor suit	9	8	Cr5000	2	Zero-G 1
Powered armor	18	13	Cr200000	0 (when worn)	Zero-G 2

prestigious personal vehicle. Healthcare is the best money can buy.

A character with SOC 10+ who does not live at a High or Elite level will suffer DM-2 to all high society related social skill rolls, may be ostracized by their high-class Contacts, or even lose SOC characteristic points (at the Referee's discretion).

PERSONAL ARMOR

Personal armor reduces the damage caused by incoming attacks. Subtract the armor's Armor Rating from any damage caused to the character. It is not possible to wear more than one type of armor at a time, other than energy shields, which you may use together with any other armor.

ARMOR TYPES

Civilian and Paramilitary Protection consists of those armors that are either highly concealable, or that are acceptable to wear in most civilian settings. Characters wearing Utility Suits would never get a second look on the job where those suits are needed but wearing such a suit everywhere would raise eyebrows. Combat Armor is never discreet: whoever is wearing combat armor is signaling everyone around them that they are looking for trouble.

Bulletproof vest: lightweight ballistic armor torso protection, easy to wear under clothes.

Encased armor suit: heavy, full body rigid armor, often used by corporate SWAT and high-end mercenaries. The suit offers environmental protection as an Envirosuit (see below) and includes integrated comms and a HUD.

Energy shield: a high-energy shield emitter worn on a belt clip, capable of stopping massive amounts of damage. The Energy Shield may be worn with other armor. An energy shield completely negates the first hit it receives in combat but is then depleted. Throw 1D every following combat round; on 4-6, the shield regenerates on your turn, and may negate another hit afterwards.

Envirosuit: a full body sealed suit with attached filters and an option to attach oxygen tanks as well. Fully protects against airborne toxins and pathogens. Reduces radiation by 20 rads. The Envirosuit counts as two Items for encumbrance purposes.

Envirosuit, advanced: as an Envirosuit, but ultra-light. It does not count as an item for encumbrance purposes.

Heavy ballistic cloth: modern heavy-duty ballistic-cloth armor. Commonly worn by soldiers, well-equipped security, and TL7 mercenaries. Counts as two Items for encumbrance purposes and is not concealable.

Heavy duster: long overcoat made of reinforced leather or synth-leather. In some circles, this is the epitome of style.

Leather jacket: a heavy leather or synth-leather jacket.

Powered armor: servo-assisted fully enclosed combat armor. This powerful armor Grants DM+2 to STR and DEX characteristic checks and allows carrying double the user's Encumbrance. Powered armor grants DM+4 to all melee damage done by its wearer. Powered Armor protects against vacuum and hostile environments, as a space suit, with 6 hours of life support, and reduces radiation by 50 rads. Powered armor does not count as an item for encumbrance when worn.

Reflector: this protective fabric is specially designed to protect against laser and blaster weapons and is common on high-tech worlds where laser weapons are the norm. Reflector provides full protection against lasers only. Against other energy weapons and projectile weapons, Reflector provides no protection.

Space suit: a standard space suit, lighter and cheaper than a 20th Century Terran space suit. A space suit carries life support supplies for up to 6 hours. It protects against Vacuum, Tainted, and Exotic atmospheres, as well as airborne pathogens. Offers 2D hours of protection against Corrosive atmospheres, and 1Dx10 minutes protection against Insidious atmospheres. Reduces radiation by 60 rads. Counts as 2 items for Encumbrance purposes.

Space suit, advanced: the final evolution of the space suit. An advanced space suit does not count as an item for encumbrance, is easy enough to use even without a Zero-G skill and provides life support for 12 hours. Offers the same environmental protection as a regular space suit.

Space suit, hostile environment: a heavy-duty space suit designed for extreme conditions, such as Corrosive and Insidious atmospheres. Counts as three items for encumbrance. Protects against Vacuum, Tainted, Exotic, and Corrosive atmospheres, as well as airborne pathogens and toxins, and provides 2D hours of protection from Insidious atmospheres. Carries life support supplies for 6 hours. Reduces radiation by 150 rads. Counts as 4 items for Encumbrance purposes.

Synthsilk armor: advanced bio-engineered spider-silk armor. Synthsilk is easily concealable and does not count as an item for Encumbrance.

CYBERNETICS

Cybernetic implants, a major theme in many science fiction tales, replace or upgrade body parts with biomechanical technology. Using advanced material science and cutting-edge knowledge of the neural system, cybernetics augment the organic body, adding capabilities beyond those given to it by evolution.

Cybernetic Grades and Points

Cybernetics in Cepheus Deluxe come in four grades, detailed below. Each cybernetic implant cost Cybernetic Points. The implant's Grade is the primary determiner of the number of Cybernetic Points it uses. Characters may have up to 6 Cybernetic Points' worth of implants without penalty. Any more cybernetics, and the character will suffer from cyber-dissociation – being more machine than human. Cyber-dissociation applies a DM-2 penalty to all social skill throws (using SOC or any other characteristics). The only exception is when the character intends to intimidate others. In that case, there is no penalty.

A-Grade Cybernetics

These implants are either superficial, or extremely common among the public on most advanced worlds as to be ubiquitous.

Cyber-cosmetic modification (TL9; cost varies): changes to a person's appearance are easy to perform at high tech levels. Small modifications at TL9+ cost Cr500; a general makeover costs Cr1000; and exotic options (for example, changing your body to resemble that of your favorite animal) cost Cr5000 and upwards.

Cyberfinger (TL9; Cr500): cybernetic finger replacement.

Glow tattoos (TL9; Cr100): these are advanced tattoos consisting of smart bioluminescent skin grafts in complex patterns across the subject's skin. Patterns and designs are up to the subject. The subject may activate or deactivate the tattoos at will.

Internal OmniComm (TL9; Cr100): as an OmniComm (see below) but with a neural interface; this implant allows tele-video communication in the user's mind, without audible speech.

Internal OmniComp (TL9; Cr300): as an OmniComp (see below) but with a neural interface. The user can use their minds to operate the OmniComp without any gestures or speech. The details and consequences of having a computer implanted in a character's brain and connecting to planetary computing grid are left to the players and Referee.

Internal storage pouch (TL9; Cr800): abdominal pouch accessible via an artificial sphincter. Stows items up to 0.5 kg in weight and 0.5 liters in volume. The Storage Pouch is discreet and can only be discovered by detailed inspection or medical scans.

B-Grade Cybernetics

These cybernetic implants include most prosthetics to replace limbs or organs lost to injury, or more advanced and invasive devices that expand human capabilities. Cybernetic prosthetics do not enhance the character's innate characteristics—they only perfectly replace damaged parts. Some of these cybernetics are regulated by local Law Levels, while others are not.

Artificial gill (TL9; Cr2500): allows breathing underwater. The artificial gill is powered by the body's own electrical current, and thus requires minimal maintenance. The gills can be hidden by default, though some may want them to be visible.

Cybernetic eye (TL9; Cr5000): a baseline cybernetic eye replacement, providing perfect 20/20 vision. This cyber-eye looks indistinguishable from a normal eye. However, many opt to add cosmetic changes to the eye, or even exposed chrome to the eye housing.

Cybernetic eye, advanced (TL11; Cr7500): this implant operates as the baseline cybernetic eye, but also adds telescopic vision, infra-red imaging, and low-light optics.

Cybernetic arm (TL9; Cr6000): baseline cybernetic arm replacement. The arm can be customized to look

CYBERNETIC GRADE TABLE

GRADE	CYBERNETIC POINT COST	TYPICAL COST	DESCRIPTION
A	0	Up to Cr1000	Common implants used by civilians and typical corporate employees. Many of these can be implanted in out-patient procedures, depending on the world's tech level.
B	1	Up to Cr10000	Prosthetics and more specialized personal implants. Includes street-level combat implants that may or may not comply with the Law Level of a given world.
C	2	Up to Cr100000	Highly specialized implants, rare among civilian populations, including military-grade combat implants, and other sophisticated cybernetics.
R	3	Over Cr100000	The most advanced and invasive implants: the expertise alone required to install these cybernetics makes them exceedingly rare. The expense only compounds their rarity.

PERSONAL EQUIPMENT		
ITEM	TECH LEVEL	COST
Advanced Base	8	Cr50000
Artificial Gill	9	Cr4000
Awareness Disruption Field Generator (AwFiG)	16	Cr20000
Backpack	1	Cr50
Binoculars	5	Cr10
Breather	6	Cr75
Cargo Monitor Tag	10	Cr5
Cart, Contra-Grav	10	Cr50000
Cloaking Device, Personal	16	Cr100000
Cold Weather Clothing	2	Cr200
Compass	3	Cr5
Corrosive Gel	10	Cr250
Disguise Kit	3	Cr300
Exoskeleton	8	Cr15000
Field Rations, 5 days	0	Cr125
Firestarters	8	Cr40
Grav Lamp	13	Cr100
Hammock	3	Cr25
Handcuffs	5	Cr10
Hooligan Tool	8	Cr150
LED Flashlight	7	Cr5
Lockpicks	5	Cr25
Long-Range Communicator, 500km range	7	Cr250
Mapper, Instant	9	Cr1500
Measuring Beacon	12	Cr1500
Measuring Tape, Advanced	9	Cr500
Medkit	8	Cr100
Memory Randomizer	16	Cr10000
Mess Kit, Individual	4	Cr20
Multiscanner	12	Cr2000
Night Visor	8	Cr100
OmniComm	8	Cr50
OmniComp	8	Cr250
Omnitool	8	Cr150
Oxygen Tanks, 6-hour duration	6	Cr250
Panic Button	14	Cr1000
Portable Fusion Generator	12	Cr500000
Portable Generator	5	Cr1000
Pulverizer	8	Cr40
Radar Mapper	8	Cr1000
Radiation Detector	10	Cr100

PERSONAL EQUIPMENT (CONTINUED)		
ITEM	TECH LEVEL	COST
Rescue Bubble	8	Cr900
Rope, 50m	1	Cr50
Sleeping Bag	5	Cr50
Sonar Window	11	Cr900
Spray Sealant	9	Cr30
Super Adhesive	8	Cr20
Super Lubricant	8	Cr15
Tech Toolkit	7	Cr300
Tent	1	Cr100
Tent, Pressure	8	Cr2000
Thruster Pack	8	Cr200
Water Canteen	1	Cr5
Water Purification Tablets	7	Cr10
Water Saw	8	Cr20000
Welder, Laser	9	Cr6000

however the character likes. Human-looking cybernetic arms can pass visual inspections but are detected by medical or detailed physical inspections.

Cyberhand (TL9; Cr1500): cybernetic hand replacement. The hand can look however the character likes.

Cyberleg (TL9; Cr9000): baseline cybernetic leg replacement. Cybernetic legs are large enough to install an Internal Storage Pouch at regular prices.

Data safe (TL9 Cr5000): this small implant stores encrypted files in the character's skull. The data safe cannot be detected by normal sensors; a deep medical scan of the character's brain is required to detect the safe. The character may or may not have access to the data safe, or the decryption key. On worlds with Law Levels 6+, the Data Safe is a regulated cybernetic.

Head bomb (TL9; Cr3000): a tiny remote-controlled explosive device implanted in a subject's brain. The detonation will kill the subject without causing any collateral damage. Head bombs are rarely implanted voluntarily and are widely illegal.

Internal blade (TL9; Cr5000): a set of two 10cm (4") retractable blades are implanted in the character's limbs. These can be wrist blades, knuckle spikes, knee spikes, or even dew claws. The character's unarmed attacks do 2D damage. The blades are constructed out of ceramic composites to avoid detection by most security scans. Only medical scans or TL13 or better sensors will detect the blades. Internal blades are considered illegal on world with Law Level 4+.

Internal weapon (TL9; Cr5000, special): this arm-mounted implant allows the character to carry a concealed weapon internally. This can be any pistol-sized weapon limited by tech level: stealth pistol, gyrojet pistol, gauss pistol, laser pistol, blaster pistol, or stunner. The weapon's magazine capacity is half normal but can be reloaded normally via a retractable magazine holder. Internal weapons still suffer the DM-2 penalty to hit while in melee combat. The internal weapon's price is Cr5000, plus twice the weapon's cost. Internal weapons can be detected with medical scans or detailed physical inspections. Internal weapons are considered illegal on worlds with Law Level 4+.

Internal filtration system (TL9; Cr3000): protects from airborne toxins and pathogens.

Internal oxygen supply (TL9; Cr4000): provides 3 hours of oxygen.

Prehensile tail (TL9; Cr9000): Provides an additional grasping/manipulating appendage. This appendage provides a DM+1 to any opposed grapple checks in melee combat but does not provide any additional actions. The tail is also strong enough to support the weight of its owner.

C-GRADE CYBERNETICS

These implants are all very invasive, and require the amputation of two limbs, and a great deal of surgery. They are thus almost always restricted and very expensive. C-grade implants are usually reserved for elite military and espionage operatives. Only the most well-connected and wealthy civilians can acquire them.

Advanced cyberarms (TL9; Cr20000): This implant replaces both arms, as well as reinforces the spine. Advanced cyberarms give Advantage to all arm/manipulation Athletics throws and DM+4 to unarmed

combat damage. Note that this bonus applies to relevant Athletics tests, but not other skill tests. The damage bonus is cumulative with any internal blade damage bonus, and with the powered armor bonus. Advanced cyberarms count as two implants (total 4 cybernetics points), as they replace both arms.

Advanced cyberlegs (TL9; Cr50000): this implant replaces both legs and reinforces the hips and spine. Advanced cyberlegs give Advantage to all Athletics checks involving running or leaping, subject to the same limitations as Advanced cyberarms, above. As an action, the character may throw Athletics 8+ to jump 10m horizontally in any direction or 3m upwards. Treat the character's STR as 4 points higher for purposes of calculating encumbrance limits. This implant also doubles the character's movement speed to 20m per action (up to 40m per round if the character uses both actions for movement). Advanced cyberlegs also reduce falling damage by 1D. Advanced cyberlegs count as two implants (total 4 cybernetics points), as they replace both legs.

Augmented joints (TL9; Cr25000): an invasive series of implants replace the character's joints with advanced synthetics, high-tech lubricants and shock absorbers. Augmented joints grant inhumanly fine motor precision. This gives Advantage for non-combat throws that require fine motor manipulation and control. For example: lockpicking, sleight-of-hand, and electronics repair.

Hacking module (TL9; Cr50000): this implant consists of an upgraded, specialized OmniComp and dedicated enhanced synaptic neural processors for computing. A discreet neural jack line feed allows the character to connect to any computer directly. The Hacking Module grants a flat DM+1 to the character's Computer skill and allows remote hacking of unprotected electronics at up to 3m. Note that at TL9+, most personal electronics cannot be remotely hacked. The Hacking module is illegal on worlds with Law Levels 4+.

Hypercosmetic surgery (TL9; Cr75000): perfect body sculpting and implanted synthetic pheromone glands radically reconstructs the subject's body to be perfectly attractive to other members of their species. Grants Advantage to all social skill throws in situations where physical attractiveness matters.

Subdermal armor (TL9; Cr15000): keratin and ceramic bone lacing and light shielding of vital organs provides 2 points of armor protection. The implant is subtle enough to pass visual inspection but can be spotted with sensor scans. Subdermal armor is added to the Armor Rating of any worn armor. Subdermal armor is legal on most worlds, but usually will be controlled on worlds with Law Level 8+.

Subdermal armor, heavy (TL9; Cr20000): unlike the lighter variety, heavy subdermal armor makes no attempt at being discreet. It provides 5 points of armor protection that is added to the Armor Rating of any worn armor. Heavy subdermal armor is detectable upon visual inspection and counts as two implants (4 Cybernetic Points). Heavy subdermal armor is illegal on worlds with Law Level 3+.

R-GRADE CYBERNETICS

Extremely invasive, experimental, and irreversible cybernetics. These implants are all highly illegal for anyone to own, outside of restricted military circles.

Berserker module (TL9; Cr200000): this dangerous combat augmentation keeps the user going no matter what injury they sustain. The character stays conscious and active as long as they have even one point of Lifeblood left – even when severely injured. They still die if their Lifeblood reaches zero.

Bastet frame upgrade (TL9; MCr1): a radical reconstruction of the entire organic body to grant superhuman agility and speed. The implant doubles the character's DEX (to a maximum of 20), and grants Advantage on all DEX-related Athletics and Stealth throws. Furthermore, the Bastet Frame increases the character's movement speed from 10m per round to 15m per round. The Bastet Frame Upgrade is incompatible with the Hercules Frame Upgrade.

Control rig implant (TL9; MCr1): this is a highly specialized implant designed to give elite vehicle pilots even more of an edge. The control rig allows the operator to fully interface their minds with vehicles. The control rig gives the character Advantage on Vehicle skill throws with suitably modified vehicles. This does require the operator to be in the vehicle, and "plugged in." Modifying a vehicle to work with control rig increases its cost by 10%. If the vehicle takes damage, roll END 6+ to avoid taking 1D damage from electrical feedback.

Hercules frame replacement (TL9; MCr1): a radical reconstruction of the entire organic body grants superhuman endurance and might. The Hercules Frame doubles the character's STR and END (to a maximum of 20), affecting Stamina, Lifeblood, and unarmed combat damage. It also gives Advantage on all Athletics throws requiring brute strength, and Grapple checks in Melee Combat. The Hercules frame upgrade is incompatible with the Bastet Frame Upgrade.

Military-grade neural cyberspace interface (TL11; MCr1): the ultimate interface between the human brain and a machine. The neural cyberspace interface functions as a Hacking Module, but also grants Advantage to all Computer and Repair throws related to electronics and computers.

Minerva upgrade (TL13 MCr3): this implant requires the radical reconstruction of the entire organic neural system. It includes synaptic enhancers, nano-tech upgrades to dendrites, and multiple supplemental

neural processor implants directly in the brain. The end result is superhuman intelligence, doubling the character's INT (to a maximum of 20).

Neural booster (TL9; MCr2): this invasive augmentation to the character's nervous system and adrenal glands boosts reaction times and suppresses the fight-or-flight response. The Booster grants an additional action per combat round for a total of three. Characters with the Neural booster implant also roll to avoid Surprise with Advantage. As well, the character never suffers the unskilled penalty (DM-3) when rolling to avoid Surprise.

Vacuum adaptation (TL13; MCr1): the ultimate spacer implant turns the user into a voidwalker. Internal oxygen reserves, micro-seals, and metal weave skin allow an hour of operation in vacuum without a space suit. An integral grav unit allows short-range maneuvering in low and micro-gravity. The grav unit is too weak to maneuver in any gravity beyond 0.05g. This augment also provides 5 points of integral armor and reduces radiation by 10 rads. The Vacuum Adaptation implant is visible upon medical inspection or sensor scan but is otherwise quite discreet.

EXPLORATION AND PERSONAL EQUIPMENT

The following items are common among adventurers and explorers. This list is not complete; we invite you to add interesting equipment for their adventuring characters from other games, with Referee approval.

The **Advanced base** is pressurized, modular, and capable of housing 6 persons. It requires 12 person-hours to assemble. Life support lasts for 24 hours without a portable generator to power atmoscrubbers.

An **Artificial gill** allows unlimited underwater activity on worlds with atmospheres 4-9.

An **Awareness disruption Field Generator (AwFiG)** emits a low-grade psionic wave that affects the perception of those around, causing them to disregard or overlook the presence of a person or thing. To the passer-by the wearer of the AwFiG is not present or is just part of the background and is unlikely to be remembered.

A Backpack does not count as an item for encumbrance when worn. The items in the backpack still do count towards encumbrance.

Binoculars are standard survival and exploration equipment. At TL5, they are ruggedized for extended wilderness use, and come equipped with a compass and scaled optics. Beyond TL7, hand-held binoculars become integrated into high-tech optical sensors.

A **Breather** is a dual-purpose gas/filter mask apparatus that condenses Thin and Very Thin atmospheres for comfortable breathing. It also filters out Tainted atmospheres. Attachments for oxygen bottles make the Breather useful for operating in Exotic atmospheres.

Cargo monitor tags are ubiquitous RFID (radio frequency identification) transponders that emit a short-range signal to about 500m. Any Omnicomm can be used to track the tags, which are typically attached to cargo containers. These tags are quite useful, and help cargomasters organize cargo for storage, as well as the loading and unloading of cargo bays. The tags can be placed anywhere and are relatively small enough to go unnoticed at the bottom of a backpack or bin.

A **Contra-Grav Cart** is too slow to use as a vehicle but can carry up to 500kg of gear at a speed of 10m per combat action. With some versions, it is possible to "tether" the cart to a person, which makes the cart follow that specific person at a distance of 3m to 20m.

A **Personal Cloaking Device** permits its user to become practically invisible. The light-distorting gravitic lensing of the device affects all visible light for organic and mechanical eyes. However, the target still emits infrared heat radiation.

Cold Weather Clothing protects against inclement weather. When wearing Cold Weather Clothing, characters can survive in Arctic environments without taking any damage (see the Environmental Hazard Chapter). The TL12 version costs Cr800 and does not count as an item for encumbrance. Note that harsher environment, far colder than a typical arctic climate, may require additional protection.

A **Compass** is standard equipment in all wilderness survival kits. At TL8, they incorporate gyroscopic and electronic features that make them usable on any world, given a few minutes of calibration.

Corrosive Gel comes in small metallic tubes. It can be used to mark surfaces or to destroy small objects (like door locks). The gel consists of a binary chemical agent in two chambers in the tube. Once opened and applied, the agents combine within 1D minutes. The exact effect is left to the Referee. Each tube is one-use only.

Disguise Kits are highly personalized collections of makeup, clothing, wigs, and other accoutrements that allow a skilled user to not be recognized, or even pass as someone else. At higher tech levels, Disguise Kits may include 3D printed latex masks (TL7), retina scanner spoofers (TL9), or even holographic enhancements designed to spoof facial recognition algorithms (TL10). Increase the kit's price by 100% for each of these listed features.

An **Exoskeleton** grants its user a +6 bonus to their STR score for Athletics/STR skill checks. It also allows the character to jump up to 2m vertically, or 5m horizontally, and increases the wearer's movement speed to 15m/action. Another benefit is that the exoskeleton allows soldiers to march their normal cross-country speed while tiring at half the rate. The exokeleton's batteries are good for 48 hours of activity before requiring

replacement. At higher tech levels, exoskeletons are often replaced by cybernetics.

5-days' worth of **Field Rations** each count as a single item for encumbrance. TL9+ field rations are much lighter: 25 field rations count as one item.

Firestarters are fast-burning chemicals in one-use packages. They will automatically start a sustainable fire with prepared wood and brush kindling. Throw Survive/INT 6+ to start the fire if the wood or other fuel is wet.

A **Grav Lamp** is a floating hands-free light source. It can illuminate an area between 2m and 10m in radius. The illumination radius is adjustable by means of a small lightweight "anchor" worn on the person and does not count as an item for encumbrance. The grav lamp will float near or next to the anchor, between 0.5m and 10m away, depending on the setting used.

A **Hammock** is a cloth or synthetic textile temporary sleeping surface, suspended between two fixed points. It can also be used as a shade. Supports up to 150 kg.

Handcuffs and other similar restraining devices are commonly used by bounty hunters and law enforcement officers. Escaping properly applied handcuffs requires a STR 12+ throw. Palming the key and keeping it hidden until the right time is a Deception/DEX 10+ throw.

The **Hooligan Tool** is a 0.8-meter, 4 kg tool is designed to breach common door/hatch types. There is forked spade end (for getting doors open), a horn (for getting that initial grab into opening an iris valve or busting padlocks), and a wedge (for those pesky hatches). The tool is designed to maximize leverage. Made of special alloys and composites, the tool is non-sparking, a feature that prevents accidents in explosive atmospheres such as a ship with a liquid hydrogen leak. Complete with fiberglass shaft and hand grips made from non-conducting material.

An **LED Flashlight** is a hand-held, rubberized, sturdy light source with a variable light aperture. The 2m cone of light has a range of 50m, but it can be adjusted to illuminate a 5m radius. Smaller, more expensive (Cr20) versions can be mounted on weapons or clipped to armor. A TL7 LED Flashlight's battery will last for 24 hours. By TL11, the battery will last for a decade of continual use.

A standard set of **lockpicks** in a handy carrying pouch. Attempting to pick a lock without lockpicks penalizes the attempt by DM-2.

A **Mapper (Instant)** can be attached to any hand computer or used alone. It consists of a computer, display, and launcher for a data-gathering probe. The probe is an anti-grav unit that will rise 100-200 m into the air and take 360-degree image of all visible terrain. This data is then compiled into a 2D, or 3D map displayed by the base unit. The Mapper also instantly calculates topographic features and distances to user-selected points.

Measuring Beacon: A larger-size version of the Advanced Measuring Tape, which can be used as a homing beacon. By leaving the base at a predetermined point and carrying the beacon, the user will always know which direction and how far to go to return to the base unit. The Measuring Beacon has a 500km range.

A **Measuring Tape (Advanced)** consists of a base unit and one or more movable beacon units. When activated, the device displays the exact distance between itself and the beacons. It can be thus measuring the dimensions of any object, by placing the base at one edge and the beacon at the other, or placing two beacons on either side, or measure area by placing beacons on 4 sides.

Medkits are standard issue in all survival kits and can be found in ship's lockers across known space. They contain all the necessary equipment and compounds to deal with minor trauma and easily treatable emergencies. A Medkit is required to treat Minor Wounds (see the Combat chapter, below).

A **Memory Randomizer** is an insidious disguise device: everyone who comes into contact with the wearer of the Randomizer perceives the wearer but cannot accurately describe them. This makes them impossible to identify by memory unless the target makes a successful INT 12+ throw. The Memory Randomizer can be placed on an object to make it so ubiquitous as to be unrecognizable.

A **Mess Kit (Individual)** includes plate, utensils, cup, storage case and disposable cleaning cloths and counts as one item.

The **Multiscanner** combines several sensor functions: it can detect radiation, electromagnetic emissions, metals, and a limited set of chemicals and biological compounds. It can also perform standard blood tests.

The **Night Visor** combines low-light and infra-red vision goggles into one handy device.

Today's smartphones will eventually evolve into an **OmniComm**, a combination of all your telecom needs in one device, with holographic augmented reality capability. The same applies to the OmniComp – a hand-held, light-weight computer which evolved from both the laptop and the tablet computer. Both devices are designed to integrate with whatever telecommunications networks are present on a given world. TL8 batteries for these devices last for a few days; TL9 batteries last for months between recharging.

The **Omnitool** is an auto-adjusting, auto-fitting repair tool. It will fit exactly to any kind of bolt, screw or fastening device, and also doubles as wire-cutters, small hacksaw, flashlight, and a myriad of other tools. All this is packed into one item's worth of encumbrance!

A **Panic Button** uses ultrasonic waves and other sensory inputs to produce a physiological and emotional terror response. The Panic Button influences

the emotional states of creatures within a 5m wide, 15m long cone, forcing them to make Morale rolls.

The **Portable Fusion Generator** is a marvel of interstellar technology, and a crucial piece of equipment for colonies across the galaxy. They are also very useful for mercenary outfits that rely on energy weapons. These generators are small (20kg), rugged, and designed to last for decades.

Portable Generators are still commonly used across the galaxy to generate electricity far away from central power grids. Most run off of refined hydrocarbons that can be sourced locally. This one is 15kg and consumes 4 liters of fuel per hour. Higher tech level versions are smaller and more fuel efficient.

A **Pressure Tent** lacks an airlock and must be depressurized to enter or leave; it can house up to 2 people and requires an external oxygen tank.

The **Pulverizer** is – a combination of hammer, nail puller and pry bar. Made of high-tech materials to be lightweight but highly durable. The Pulverizer adds DM+1 to any Strength roll to force open a mechanical object such as a door or iris valve.

The **Radar Mapper** uses radar technology to scan a room or similar space, producing a 3D map of it, to a maximum volume of 10m by 10m by 10m.

The **Radiation Detector** is a matchbox sized device that displays radiation levels in a 10m radius. It also indicates the type of radiation if that is important. The detector can also serve as an alarm, chiming loudly when radiation levels are dangerous to humans. This feature can be shut off.

A **Rescue Bubble** is a 2m-diameter plastic bubble. Piezoelectric layers translate the user's movement to electricity to recharge the bubble's battery. It contains enough life support supplies for 2 person-hours of operation. The bubble's skin can self-repair all but the most serious punctures.

A 50m length of **Rope** is easy to come by. At TL1, it can hold 50kg. By Tl8, rope is fully synthetic, and can support 500kg of mass before breaking.

A **Sleeping Bag** is a cloth or synthetic padded bag for one person, to provide insulation/ cover while sleeping. At TL 7, cold weather bags are available. Regular bags are effective to zero degrees centigrade, while cold weather bags, costing Cr150, are insulated to negative 30 degrees centigrade.

A **Sonar Window** is a flat-screen device that attaches to a wall/partition. It uses sonar to display what is on the other side of the wall. Image quality depends on Tech Level. The TL11 version displays basic outlines, the TL 12 version costs Cr2000 and improves image quality and 3D effect. At Cr7000, the TL14 version's display is virtually indistinguishable from that of an actual window.

The **Spray Sealant** can seal torn space suits and small hull breaches. The canister is good for three such applications, or one larger hull breach.

The **Super Adhesive** is instant bonding and possesses super-strength. The adhesive comes in roughly 1L canisters that are sufficient for five generous applications. The adhesive adheres to most surfaces, has a drying time 1 minute. Pulling apart the two bonded objects requires a STR 12+ test and will ruin both objects. A special chemical is available for removing people glued to objects with Super Adhesive. It costs Cr100 per application.

The **Super Lubricant** is composed of near-frictionless space-age synthetics. Each can is good for six applications. The lubricant is a standard part of a maintenance tech's toolset. In addition to loosening stuck objects and ensuring that the internal workings of any mechanical device are working properly, the Super Lubricant can render any surface near frictionless. Standing on a surface coated in Super Lubricant requires an Athletics/DEX 10+ throw. Walking or,

heaven forbid, running on such a surface is impossible. Crawling can be done at 1m per round.

A **Tech Toolkit** is fully equipped to handle almost any technical job that doesn't require a full workshop. As the tech level increases, many of the tools are self-modifying "smart" tools that can reconfigure depending on what the tech needs. This reduces the bulk of the toolkit.

A **Thruster Pack** requires Zero-G skill level 0 and allows maneuvering in zero-G conditions at normal movement rates. Note that this is a TL8 device and does not use any anti-gravity technology. Characters and objects moving by thruster pack are still subject to the laws of motion.

Water Purification Tablets cost Cr10 for a pack of 50; each tablet can sterilize up to 1L of water from most types of microorganisms.

A **Water Saw** requires a separate power supply and a large volume of available water. Pumps create extreme water pressure (90,000 psi or more) which is directed through a tiny nozzle. The stream is powerful enough to cut through concrete, stone, and even light metals. Weighs 1000kg and is usually mounted on an exoskeleton or small vehicle.

The handheld **Welder** uses a focused laser beam to perform cutting and welding operations. It can cut through a reinforced bulkhead in 1D starship combat rounds (6-36 minutes). Roll Repair/DEX 10+ to reduce the time to one starship combat round (6 minutes) As a weapon, the laser welder is inaccurate and clumsy, but extremely dangerous: it does 4D damage with a range of 1/5 and has energy for 5 "shots." As a weapon, the welder also has the Fire aspect.

PHARMACEUTICALS

Below is a brief list of pharmaceuticals and drugs that are available at various tech levels. Side-effects for using these drugs are left to the Referee.

ANTI-RADIATION

Administered before or immediately after radiation exposure, this drug absorbs 100 rads. Taking more than one dose a day causes 1D permanent END damage.
Cost: Cr1000/dose
Tech Level: TL8

CATSIGHT

This medication grants its user night vision for up to 12 hours. The character does not suffer penalties from operating and fighting in low-light conditions and only suffers DM-1 in total darkness.
Cost: Cr100/dose
Tech Level: TL9

FAST FORWARD

This drug slows metabolism by a ratio of 60 to 1 – a subjective day to the user is 2 months of real time. Note that this drug will reduce life-support consumption and is often included in emergency survival kits aboard starships.
Cost: Cr200/dose
Tech Level: TL11

SLOW MOTION

This drug accelerates metabolism by a ratio of 1 to 60 – a subjective hour to the user is one minute of real time. Note that this drug accelerates healing accordingly. Using this drug is dangerous without Medicine 1 or better care.
Cost: Cr300/dose
Tech Level: TL11

HYPERSPACE

Hyperspace is a powerful stimulant, allowing characters to function perfectly for up to 72 hours straight without rest. Once its influence expires, the character is Fatigued (DM-2 to throws), loses 1D Stamina, and must rest for at least 12 hours to recover.
Cost: Cr50/dose
Tech Level: TL9

LONGEVITY TREATMENT

Longevity drugs prevent aging. For them to be effective, a character must take one dose each month. If the character misses even one month of Longevity Treatment, they revert to their chronological age within a week, which may be lethal in some cases.
Cost: Cr5000/dose
Tech Level: TL15

PANACEA

The Medicinal drug represents a wide variety of vaccines, antitoxins, antibiotics, and other pharmaceuticals. Panacea allows a character with at least Medicine 1 to neutralize a disease or poison on a throw of Medicine/EDU 8+. The cost of any drug is at the Referee's discretion. Advanced TL11+ medications cost ten times as much but grant Advantage on the Medicine throw.
Cost: Cr50+/dose
Tech Level: TL5

ROBOTS

Robots! The very word conjures up hopes and fears for the future. The idea of an autonomous mechanical entity is old, but its implementation became reality in the early 21st century CE on Earth (TLs7-8). At first, robots revolutionized industrial processes, but eventually even vacuum cleaners were roboticized. In these rules, contrary to various dictionary definitions, "robot" refers to a mobile, autonomous (or remote-controlled) machine capable of varied actions.

All robots and drones have a Chassis and a CPU. All robots (but not drones) have a Robot Type. It is possible to further modify robots, and we present a variety of options, but these modifications are not mandatory. Robots have a number of Build Points determined by their mass, limiting the total number of components that can be installed. For the sake of rules simplicity and clarity, like organic beings, Robots have Stamina (superficial damage capacity) and Lifeblood (internal damage capacity). They also have armor that functions like personal armor to reduce the damage of attacks.

Note that robot base speed is 5m/action. Higher speeds require the installation of Modifications. Robots start with Sensors +0, further modified by Type and specific Modifications.

ROBOT DESIGN SEQUENCE

A. Select a Chassis. This determines Mass, Stamina/Lifeblood, Build Points, and Armor.

1. Select a CPU. Drones have no CPU; they always require a sentient operator. Smart drones and robots can operate autonomously. The CPU determines the robot's Intelligence and skill points.
2. For robots, select a Robot Type. This grants certain Modifications, two Base Skills, and could multiply the Chassis' cost.
3. In addition to Base Skills, robots with advanced CPUs have skill points to spend on skills. Use these skill points to improve Base Skills, or to purchase new ones. The maximum level in any skill depends on the CPU.

Optional: purchase modifications, by spending Build Points.

* Smart Drones do not receive base skills.

ROBOT CHASSIS

MASS (KG)	STAMINA/ LIFEBLOOD	BUILD POINTS	UNARMED DAMAGE	BASE ARMOR	COST (CR)
5 (DM-2 to hit a robot of this size)	1/2	1	1D-2	2	750
10 (DM-1 to hit a robot of this size)	3/6	3	1D-1	3	900
25	5/10	4	1D	3	1200
50	7/14	6	1D	4	2000
100	9/18	6	1D+1	4	4500
200	12/24	8	1D+2	5	5000
400	15/30	9	2D	5	6000
600	20/40	9	2D	8	7000
1000+	25/50	10	3D	12	10000

ROBOT CPU

CPU	TL	INTELLIGENCE	SKILL POINTS	MAX SKILL LEVEL	COST (CR)
Drone	6	-	-	-	50
Smart Drone	8	2 (-2)	1*	1	1000
Basic Autonomous	9	4 (-1)	Base	1	5000
Advanced Autonomous	10	5 (-1)	Base+1	1	10000
Simulated Intelligence I	11	6 (0)	Base+2	2	100000
Simulated Intelligence II	13	8 (0)	Base+4	3	1000000
True AI	16	12 (+2)	Base+10	5	Priceless

ROBOT TYPES

ROBOT TYPE	INTEGRAL MODIFICATIONS	BASE SKILLS (LEVEL 1)	TL	CHASSIS AND CPU COST MULTIPLIER
Combat	Heavy combat chassis AR x2	One weapon skill, Tactics	10	X3
Humanoid	Passes as human on casual inspection; its sensors mimic human senses.	Any 2	13	X10
Janitor/Labor	-1 Sensors	-	8	X0.5
Medical	Medical Instruments cost 1 BP; DEX 8	Medicine, Science	13	X4
Protocol	-	Liaison, Admin/Steward/ Language	12	X0.75
Pursuit	Move x2	Athletics or Vehicle Skill, Tactics	9	X1
Repair	Tools cost ½ BP	Repair, Computer	10	X1.5
Scout	Sensors +2	Stealth, Recon	9	X1
Security	Sensors +1	One weapon skill, Recon	9	X1

ROBOT MODIFICATIONS AND UPGRADES				
MODIFICATION	DESCRIPTION	BP	TL	COST (CR)
Additional Limb	Additional arm	1	8	700
Aircraft Flight	Capable of flight; robot must be at least 50kg in mass. Can fly up to 500km/h	4	8	25000
Armor Upgrade: +1 Armor	Basic armor upgrade by 1 point of armor; max total 15	1 / +1	8	100 per point of Armor
Detachable Surveillance Module	Allows remote aerial reconnaissance	2	9	1000
Equipment	Tools or other miscellaneous equipment	1 / tool	8	Varies
Grav Module	Capable of flight, regardless of mass	1	12	10000
Holographic Camouflage	Obscures and breaks up the silhouette, causing DM-2 to hit the robot.	2	12	2000
Laser Welder	Laser welder	1	8	8000
Leaper Upgrade	May jump up to double its movement range in one Action	1	9	2500
Long Range Comms	Can communicate with distant receivers, up to orbital ones.	1	8	5000
Munitions Hold	Additional ammunition for mounted weapons	1	8	100
Quad Rotors	Capable of flight; limited to 50kg or less in robot mass; can fly up to a speed of 50km/h	1	8	100
Retractable claws	Hand to hand damage 3D	2	8	150
Self-repair	1D Lifeblood repaired per round	4	13	50000
Sensor Upgrade	DM+1 to basic sensors. Max four times.	1 / +1	8	500 per +1
Speed Upgrade: +5m/action (3 upgrades max)	Additional speed per action up to 20m/action	1 / 5m	8	100/5m
Subdermal Armor Upgrade	AR 4, humanoid robots only	2	13	1000
Enhanced Targeting Matrix	DM+1 to hit in ranged combat	1	9	5000
Tentacle	Robot gains DM+2 to Grapple throws.	2	9	1200
Weapon mount, Light	Light armament – small arm	2	8	50 + weapon
Weapon mount, Heavy	Heavy armament – heavy weapon	4	8	1000 + weapon

SAMPLE ROBOTS

CARGO BOT									
ROBOT TYPE	TL	COST	TYPE	MASS	STAMINA	LIFEBLOOD	ARMOR	SENSORS	SPEED
Cargo Bot	9	Cr6000	Labor	600kg	20	40	8	-1	5m

CPU: Basic Autonomous
INT: 4 (-1)
Skills: None
Modifications: None

ANDROID									
ROBOT TYPE	TL	COST	TYPE	MASS	STAMINA	LIFEBLOOD	ARMOR	SENSORS	SPEED
Android	15	Cr1046100	Humanoid	100kg	9	18	8	+0	10m

CPU: Simulated Intelligence I
INT: 8 (+0)
Skills: Carousing 2, Gun Combat 1, Liaison 2, Melee Combat 1
Modifications: Subdermal armor x1, Speed 1

AUTODOC									
ROBOT TYPE	TL	COST	TYPE	MASS	STAMINA	LIFEBLOOD	ARMOR	SENSORS	SPEED
Autodoc	13	Cr1022000	Medical	200kg	12	24	5	+3	0

CPU: Simulated Intelligence I
INT: 8 (+0)
Skills: Medicine 3, Science 3
Modifications: Medical instruments, DEX 8 (0), sensors +4

SECURITY BOT									
ROBOT TYPE	TL	COST	TYPE	MASS	STAMINA	LIFEBLOOD	ARMOR	SENSORS	SPEED
Security Bot	9	Cr6850	Security	100kg	9	18	10	+2	10m

CPU: Basic Autonomous
INT: 4 (-1)
Skills: Gun Combat 1, Recon 1
Modifications: Light Weapon Mount, SMG (2D damage), Munition Hold, sensors +1, Speed 1

WARBOT									
ROBOT TYPE	TL	COST	TYPE	MASS	STAMINA	LIFEBLOOD	ARMOR	SENSORS	SPEED
Warbot	10	Cr53850	Combat	400kg	15	30	15	+2	10m

CPU: Advanced Autonomous
INT: 5 (-1)
Skills: Gun Combat 1, Melee Combat 1, Tactics 1
Modifications: 2 Heavy Weapon Mounts, Light Machinegun (3D damage) and Grenade Launcher (by grenade), Munition Hold, sensors +2, Retractable Claw (3D damage)

RECON DRONE									
ROBOT TYPE	TL	COST	TYPE	MASS	STAMINA	LIFEBLOOD	ARMOR	SENSORS	SPEED
Recon Drone	8	Cr3000	Scout	10kg	3	6	3	+1	10m

CPU: Smart Drone
INT: 2 (-2)
Skills: Recon 1
Modifications: Sensors +1, Quad Rotors, Speed 1

VEHICLES

Science fiction stories often feature wild chases, armored warfare, or exploration of remote planets by all sorts of vehicles. A wide variety of vehicles exist across cultures and species for planetary, atmospheric, and oceanic transportation. The following is a list of a few of the more common conveyances.

Characters may purchase a vehicle at its base Tech Level or on any higher TL. Higher-tech vehicles typically have greater range and endurance, at the Referee's discretion. At TL 8 and higher, autopilot is standard on all vehicles.

STAT BLOCK EXPLANATION

Tech Level (TL): technological level, as noted above.

Cost: in thousands of Credits (KCr).

Agility: represents the vehicle's maneuverability. Applies as a DM to skill and Position throws in vehicle combat.

Speed: top speed in km/h; cruising speed is 75% of the listed top speed; off-road speed is equal to 50% of top speed.

Range: how far the vehicle can go at cruising speed before refueling. Given in kilometers.

Armor: the vehicle's Armor Class: Unarmored, Light, or Heavy.

Crew/Passengers: the first number shows the number of crewmembers the vehicle requires; the second, the number of passengers it may carry.

Cargo: dedicated cargo capacity in kilograms or metric tons.

Weapons: weapons included in the vehicle's price by default. Heavy weapons use the Heavy Weapons skill. Gunnery weapons use the Gunnery skill.

Active Countermeasures: When a vehicle equipped with Active Countermeasures is attacked by a rocket, missile, or grenade, throw 2D; on 7+, the Countermeasures intercept the munition, neutralizing the attack.

CEPHEUS ENGINE SRD/ CORE CONVERSION NOTE

To convert Cepheus Engine SRD/Core vehicle armor to Cepheus Deluxe, use the following table:

When using vehicles from other Cepheus Engine books that use multiple armor ratings, such as different armor for each vehicle facings, simply average the armor rating (rounding down fractions) and consult the table above.

CONVERSION TABLE

CE: SRD/CORE ARMOR RATING	CEPHEUS DELUXE ARMOR CLASS
6 or lower	Unarmored
7-24	Light
25 or higher and/or Hull/ Structure of 40/40 or greater	Heavy

4x4 Utility Vehicle **Skill: Driving**

A heavy car (or light truck) built for ruggedness and off-road capabilities. The military version of this vehicle costs KCr84, may have Light Armor (at the Referee's discretion), and may mount two heavy weapons or one Gunnery weapon.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
7	40	+0	100	400
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Unarmored	1/4	2	None	
Features: Maximum off-road speed is 75km/h.				

Armored Personnel Carrier **Skill: Driving**

A low-tech armored vehicle used to carry infantry, which comes in either tracked or wheeled varieties. A TL8 version costs KCr200, has a top speed of 100 km/h, as well as Active Countermeasures.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
6	60	-1	70	500
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Light	3/14	1	1 GP Machine Gun	
Features: None.				

Bus **Skill: Driving**

A common mass transit bus, capable of carrying many passengers at reasonable speed and comfort.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
7	35	-2	100	500
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Unarmored	1/50	8	None	
Features: None.				

Exploration Vehicle **Skill: Driving**

A pressurized long-range heavy exploratory vehicle used for planetary surface travel and surveys.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
8	500	-1	80	500
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Light	1/14	4	None; may mount 1 heavy weapon	
Features: Maximum off-road speed is 60km/h; cramped accommodations for 15 people; sealed and pressurized; orbital-range comms array.				

Ground Car **Skill: Driving**

The staple of low-tech urban transport. TL5-6 models are also available at an equivalent cost, but at Agility -1, speed 60 km/h, and range 200km.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
7	6	+0	150	400

Armor	Crew/Passengers	Cargo (tons)	Weapons	
Unarmored	1/4	0.2	None	
Features: None.				

Pick-Up Truck Skill: Driving

An intermediate between a car and a truck. The more rugged models sometimes end up as "technicals" – improvised combat vehicles mounting a heavy weapon or even a gunnery weapon.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
7	10	+0	120	400
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Unarmored	1/4	4	None; may mount 1 heavy weapon or 1 gunnery weapon	
Features: None. Technicals reduce speed to 80km/h, have no cargo space, and reduce crew/passengers to 1/2.				

Tank Skill: Driving

A low-tech main battle tank. A TL8 version costs KCr2000, has an Advanced Cannon and a speed of 70 km/h, Agility -1, as well as Active Countermeasures.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
6	300	-2	50	300
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Heavy	4/0	0.5	Heavy cannon, 2 GP Machineguns	
Features: Off-road speed is the same as normal speed.				

Tripod Skill: Driving

This ultimate alien fighting machine towers six meters above the battlefield on three thick, articulated legs, boasting massive armor and a devastating fusion cannon alongside the more mundane plasma guns. It also sports a cluster of tentacles for field work and for ripping apart enemy troops in close range.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
13	3000	+1	90	Practically unlimited
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Heavy	2/6	1	Fusion Cannon, 2 plasma guns, tentacles (Heavy Weapon for vehicle damage purposes; 4D damage to personnel)	
Features: Orbital-range comms; sealed and pressurized.				

Truck Skill: Driving

A heavy goods vehicle. TL5-6 models are also available at an equivalent cost, but with speed 50 km/h, and range 250km.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
7	50	-2	100	500

Armor	Crew/Passengers	Cargo (tons)	Weapons	
Unarmored	1/1	30	None	
Features: None.				

Walker Skill: Driving
A two-legged combat vehicle with a single pilot and heavy armor.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
8	500	+1	90	Practically unlimited
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Light	1/0	0.1	Advanced Cannon	
Features: Orbital-range comms sealed and pressurized.				

WATERCRAFT

Motorboat Skill: Watercraft
A simple motorized boat used for fishing and short-range maritime transport.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
7	20	+0	60	400
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Unarmored	2/10	10	None; may mount 1 heavy weapon.	
Features: None.				

Patrol Boat Skill: Watercraft
A simple motorized boat used for fishing and short-range maritime transport.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
7	100	-1	50	500
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Light	10/20	10	2 Light Cannons; 4 GP Machineguns	
Features: None.				

Steamship Skill: Watercraft
A low-tech maritime vessel using an external combustion engine.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
4	720	-3	20	3000
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Light	5/10	50	None; may mount up to 3 heavy weapons	
Features: 15 cabins, galley.				

Submersible Skill: Watercraft
A medium-sized commercial submarine.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
6	1700	-3	40	4000
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Unarmored	5/10	30	None; may mount 2 Heavy weapons	
Features: 15 cabins, ; sealed and pressurized.				

AIRCRAFT

Biplane **Skill: Aircraft**
A primitive airplane with four wings.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
5	20	+0	100	400
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Unarmored	1/1	0.5	None; may mount one heavy weapon; may carry light bombs	
Features: Short-range comms.				

Bomber **Skill: Aircraft**
A low-tech military craft used for tactical and strategic bombing.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
6	1000	-2	450	3300
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Unarmored	10/0	7.5	5 GP machineguns; up to 7.5 tons of bombs	
Features: Long-range comms; DM-2 attack penalty vs. propeller aircraft.				

Fighter, Propellor **Skill: Aircraft**
A general-purpose low-tech military craft used for ground attack and interception duties.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
6	500	+0	600	750
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Unarmored	1/0	0.5	2 GP machineguns, some might carry 1 Autocannon	
Features: Long-range comms; no attack penalty vs. propeller aircraft.				

Fighter, Jet **Skill: Aircraft**
A mid-tech, supersonic flight-capable fighter aircraft.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)

7	10000	+1	2500	1500
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Unarmored	1/0	1	2 autocannons; 6 air-to-air missiles	
Features: Autopilot, orbital-range comms; no attack penalty vs. any aircraft.				

Helicopter **Skill: Aircraft**
A rotor aircraft capable of vertical takeoff and landing.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
6	250	-1	100	1000
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Unarmored	1/7	1	None; may mount 2 Heavy weapons	
Features: Autopilot available; long-range comms.				

Jet Liner **Skill: Aircraft**
A medium sized commercial passenger aircraft.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
7	5000	-2	1000	10000
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Unarmored	2/100	20	None	
Features: Autopilot; orbital-range comms				

Jump Jet **Skill: Aircraft**
A commercial or paramilitary jet aircraft capable of vertical takeoff and landing.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
7	500	+1	600	5000
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Unarmored	2/6	5	None; may mount one heavy weapon	
Features: Autopilot; orbital-range comms				

GRAV VEHICLES

Aircar **Skill: Grav Vehicle**
A simple civilian gravitic car.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
10	150	+1	200	Practically unlimited
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Unarmored	1/4	0.2	None; may mount one heavy weapon	
Features: Long-range comms.				

Grav Barge **Skill: Grav Vehicle**

A commercial gravitic cargo transport.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
10	500	-1	150	Practically unlimited
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Unarmored	1/1	50	None	
Features: Orbital-range comms				

Grav Belt **Skill: Grav Vehicle**
A personal, wearable means of anti-gravity mobility. Its fusion battery can last for a week.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
12	100	+2	300	1 week of use
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Unarmored	1/0	Personal	None	
Features: Long-range comms.				

Grav Carrier **Skill: Grav Vehicle**
A personal, wearable means of anti-gravity mobility. Its fusion battery can last for a week.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
10	1000	+1	600	Practically unlimited
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Light	2/16	2	Light machine gun; may mount 2 more heavy weapons	
Features: Orbital-range comms, sealed and pressurized.				

Grav Disc **Skill: Grav Vehicle**
A single-pilot, close-support grav vehicle, essentially a militarized, combat-ready version of the Speeder.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
13	110	+2	400	Practically unlimited
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Light	1/0	0.05	1 plasma gun	
Features: Orbital-range comms, sealed and pressurized.				

Grav Gunship **Skill: Grav Vehicle**
An advanced military gravitic attack vehicle, also capable of transporting assault troops.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
12	2000	+1	1200	Practically unlimited
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Heavy	2/12	1	Fusion Cannon, 2 plasma guns	
Features: Orbital-range comms, sealed and pressurized.				

Grav Liner **Skill: Grav Vehicle**
A commercial long-range passenger grav vehicle.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
10	10000	+0	1200	Practically unlimited
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Unarmored	2/100	20	None	
Features: Orbital-range comms.				

Grav Orb **Skill: Grav Vehicle**
A translucent orb used for personal transportation on high-tech world. While it lacks the speed or sophisticated controls of the more advanced Grav Skiff, it offers affordable and accessible grav-flight.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
13	20	+1	100	Practically unlimited
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Unarmored	1/1	0.2	None	
Features: Long-range comms.				

Grav Skiff **Skill: Grav Vehicle**
A larger, faster alternative to the Grav Orb, capable of carrying more passengers and cargo. A sealed, pressurized version costs KCr375 and can carry only two passengers along with its pilot.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
13	100	+2	200	Practically unlimited
Armor	Crew/Passengers	Cargo (tons)	Weapons	
None	1/4	1	None	
Features: Long-range comms.				

Speeder **Skill: Grav Vehicle**
A small supersonic grav vehicle.

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
10	900	+3	2000	Practically unlimited
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Unarmored	1/1	4	None	
Features: Orbital-range comms; sealed and pressurized.				

Example Vehicle Agility Modifiers: note that for aircraft and grav vehicles, Agility is a function of both maneuverability and rate of climb, as both characteristics are important in Position rolls. Example Vehicle Agility Modifiers: note that for aircraft and grav vehicles, Agility is a function of both maneuverability and rate of climb, as both characteristics are important in Position rolls.

VEHICLE AGILITY TABLE	
VEHICLE TYPE	**AGILITY**
Slow cargo boats, submersibles, the slowest of heavy vehicles	-3
Tanks and other heavy tracked vehicles, heavy cargo aircraft	-2
Trucks, light tracked vehicles, small civilian aircraft,	-1
Small cars, maneuverable aircraft, grav cargo haulers	0
Fighter aircraft, Motorcycles, agile combat walkers, most grav vehicles	+1
Advanced fighter aircraft, military grav interceptors	+2
Grav speeders	+3

WEAPONS

Interstellar adventurers face their adversaries with blades, bullets, and lasers. Here we present a few common and iconic weapons used by starfarers.

STAT EXPLANATIONS

Tech Level (TL): technological level, as noted above.

Range: Effective/Maximum range in meters. To attack with a ranged weapon within effective range throw Gun Combat/DEX or Heavy Weapon/DEX 8+; beyond effective range, throw Gun Combat/DEX or Heavy Weapon/DEX 10+.

Damage: damage caused by the weapon, expressed as d6s.

Magazine: The amount of ammunition the weapon holds. If the magazine requires additional time to reload, this is noted.

Ammo Cost: per magazine, in Credits.

Cost: The weapon's cost, in Credits.

WEAPON ASPECTS

Weapons have Aspects describing any special characteristics, as noted on their table.

Auto X: These weapons fire multiple rounds with every pull of the trigger, filling the air with a hail of fire. A weapon with the Auto aspect can make attacks in three fire modes: single, burst, and full auto, as described in the Combat chapter.

X AV Hits: These weapons are useful for attacking armored vehicles. AV Hits represents the number of rolls on the Surface Damage or Internal Damage tables if the weapon penetrates the target. If the weapon causes Critical Damage, roll only once on the Critical Damage table, regardless of how many AV Hits the weapon usually causes.

Blast X: This weapon has an explosive component or is otherwise effective against all targets in its blast radius. The number given is the blast radius in meters. It is possible to avoid or minimize blast damage, see Diving for Cover in the Combat chapter.

Bulky: A Bulky weapon has powerful recoil or is simply extremely heavy. This makes it difficult to use effectively in combat by someone of a weak physical stature. Characters with STR 8 or less suffer DM-2 when using such weapons. Bipod and Tripod accessories (see

below) remove the Bulky aspect, as long as the weapon is stationary and mounted on the bipod or tripod.

Fire: On a successful hit, throw 6+ for the target to catch fire. A burning target takes 2D damage per combat round for 1D rounds, or until put out. See the Environmental Hazard Chapter for Fire effects.

Laser: At the Referee's discretion, atmospheric conditions, such as thick smoke, might incur a negative DM to laser fire.

Scattergun: Each attack fills the air with a hail of small projectiles, either flechettes or shot. Weapons with the Scattergun aspect get a DM+1 bonus to hit at effective range or closer. Anyone within 1.5m of the main target is also attacked by the scattergun effect, but at half the number of damage dice. Beyond Effective range, scatterguns only roll half the normal damage and have no bonus to hit.

Stun: These weapons deal non-lethal damage and will incapacitate a living target instead of killing it. Damage is only deducted from Stamina, after considering any armor. If the target's Stamina is reduced to 0, the target is incapacitated and unable to perform any actions for a number of rounds by which the damage exceeded his Stamina. Characters completely recover from Stun damage after one hour of rest.

Throwable: these weapons may be thrown; effective range equals the thrower's STR; maximum range equals STRx2.

Two-Handed: this melee weapon requires both hands to wield. However, all rifle-sized weapons must be wielded with two hands.

Weak Penetration: this weapon is ineffective against armor. Double any Armor Rating before applying damage from this weapon.

Zero-G: the weapon does not suffer a penalty for firing a weapon in zero-g conditions. Lasers automatically have the Zero-G Aspect.

Melee Weapons

The following weapons use the Melee Combat skill. Melee weapons cannot harm vehicles except in special cases, which are left to the Referee's discretion.

Axe (TL0): a one-handed axe made from metal or stone, anything from a stone-age tool through a medieval war axe to a modern fire axe.

Broadsword (TL2): a large two-handed sword, counts as 2 "Items" for encumbrance purposes. A two-handed Great-Axe uses the same stats.

Cudgel (TL0): a large club or mace.

Cutlass (TL3): A short, broad slashing sword with a slightly curved blade and basket-guard hilt. Traditionally used by marines and pirates.

Dagger (TL0): a straight, short knife. When wielding a Dagger, a character may use both actions in a combat round to attack.

Machete (TL3): A simple yet sturdy broad blade used for cutting foliage and foes alike.

Neural Whip (TL13): This slaver's weapon consists of a stocky handle connected to a flexible strap. Each stroke by this weapon causes stun damage as above. However, it has two additional vicious effects. First, any target hit by a neural whip must throw END 10+ or fall to the ground suffering from nightmarish pain and be incapacitated for 2D combat rounds. Second, in addition to the stun damage, the neural whip causes 1D physical damage per hit. In its intended role, the neural whip is notoriously effective. The whip is not intended for use against armored targets

Shield (TL0): A personal shield, with which characters can bash enemies for 1D damage. Anyone carrying a shield penalizes enemies by DM-1 when they attack. If a shield is used with the Overwatch action in combat, the attack is penalized by DM-2.

Spear (TL0): from a sharpened shaft to a metal-tipped spear, this is a basic, yet effective, melee weapon.

Staff (TL0): A long wooden shaft, sometimes with metal fittings, used with two hands.

Stun Prod (TL8): A high-tech riot weapon augmenting the baton's blunt force with an electric charge capable of stunning opponents.

Sword (TL1): one of any variety of medium-sized one-handed swords, from gladius (shortsword) to longsword and rapier.

Vibroblade (TL12): An intermediate-sized bladed weapon using hypersonic micro-vibrations of the blade to create a potent cutting force.

A note on unarmed damage: any character can inflict at least 1 point of unarmed damage (before armor) even if their STR DM is 0 or lower.

Common Ranged Weapons

The following weapons use the Gun Combat skill. Unless otherwise noted, consider them as Small Arms against vehicle armor.

Assault Rifle (TL7): Standard military arm on mid-tech worlds. An automatic rifle that fires an intermediate caliber. At the Referee's discretion, its ammunition, or even magazines, may be interchangeable with those of a Carbine.

Autopistol (TL5): Semi-automatic handgun fed from a magazine.

Bows and Crossbows (TL0 and 2, respectively): muscle-powered ranged weapons. Ammunition for a Bow is held in a quiver of 20 arrows, which counts as one encumbrance item. A Bow may fire once a round;

MELEE WEAPONS TABLE

WEAPON	TL	COST	DMG	ASPECTS
Axe	0	Cr25	2D	Throwable
Broadsword or Great-Axe	2	Cr300	4D	Bulky, Two-Handed
Cudgel	0	Cr10	2D	
Cutlass	3	Cr100	3D	
Dagger	0	Cr10	1D	Throwable
Machete	3	Cr50	2D	
Neural Whip	13	Cr500	1D	Stun
Shield	0	Cr20	1D	
Spear	0	Cr15	3D	Throwable
Staff	0	Cr10	2D	Two-Handed
Stun Prod	8	Cr300	2D	Stun
Sword	1	Cr150	3D	
Unarmed attack	-	-	STR DM	
Vibro-Blade	13	Cr500	4D	

PROJECTILE WEAPONS TABLE

WEAPON	TL	COST	RANGE	DMG	MAG	AMMO	ASPECTS
Gyrojet Rifle	9	Cr900	100/400	3D	20	Cr15	Auto 2, Zero-G
Gyrojet Pistol	9	Cr400	10/20	2D	8	Cr10	Zero-G
Pulse Rifle	9	Cr1000	200/400	3D	40	Cr30	Auto 3
Assault Rifle	7	Cr300	50/200	3D	30	Cr15	Auto 2
Autopistol	5	Cr150	10/50	2D	16	Cr7	
Stealth Pistol	8	Cr500	5/20	2D	6	Cr20	
Bow	0	Cr60	100/300	2D	1	Cr10	
Carbine	5	Cr250	50/200	3D	10	Cr12	
Crossbow	2	Cr75	100/300	3D	10	Cr1	
Gauss Pistol	12	Cr1000	20/100	3D	30	Cr30	Auto 2
Gauss Rifle	12	Cr1500	300/600	4D	100	Cr40	Auto 4
Light Machinegun	7	Cr1200	100/300	3D	100	Cr125	Auto 4, Bulky
Revolver	4	Cr150	10/50	2D	6	Cr5	
Rifle	5	Cr500	200/400	3D	10	Cr15	
Shotgun	4	Cr200	20/40	4D	6	Cr10	Scattergun, Weak Penetration
Submachinegun	5	Cr500	30/100	2D	30	Cr20	Auto 3
Tangler	12	Cr750	30/90	-	1	Cr100	

HEAVY WEAPONS TABLE

WEAPON	TL	COST	RANGE	DMG	MAG	AMMO	ASPECTS
Disposable Anti-Vehicle Rocket	7	Cr200	50/200	5D	1	-	Blast 1, Bulky, 2 AV hits
Flamethrower	6	Cr1000	5/20	3D	5	Cr25	Bulky, Fire
Fusion Gun	14	Cr100000	300/600	12D	-	Cr65000	Bulky, Fire, 4 AV hits
GP Machinegun	5	Cr1500	200/400	3D	100	Cr150	Auto 4, Bulky
Grav Launcher	13	Cr20000	500/1000	10D	1	Cr100	Blast 5, Bulky, Fire
Grenade Launcher	7	Cr400	100/500	By grenade	6	-	Bulky
Guided Anti-Tank Missile	7	Cr4000	200/600	5D	1	Cr200	Blast 1, 2 AV hits
Light Assault Gun	8	Cr600	100/300	5D	5	Cr30	Bulky, 2 AV hits
Plasma Gun	12	Cr20000	200/500	10D	40	Cr2500	Bulky, Fire, 3 AV hits
Rocket Launcher	6	Cr2000	50/200	5D	1	Cr150	Blast 6, Bulky, 1 AV hit
Support Laser	9	Cr5000	100/400	6D	100	Cr2000	Bulky, 2 AV hits
Under-barrel Grenade Launcher	7	Cr1000	50/200	By grenade	1	-	

ENERGY WEAPONS

WEAPON	TL	COST	RANGE	DMG	MAG	AMMO	ASPECTS
Blaster Pistol	13	Cr5000	50/200	4D	20	Cr100	Laser
Blaster Rifle	13	Cr10000	200/400	5D	50	Cr500	Auto 3, Laser
Laser Pistol	10	Cr1500	50/200	3D	10	Cr500	Laser
Laser Rifle	9	Cr3500	300/500	5D	30	Cr1500	Laser
Plasma Rifle	16	Cr15000	150/300	6D	10	Cr500	Fire
Stunner	10	Cr600	10/30	3D	10	Cr10	Stun, Zero-G

GRENADES AND EXPLOSIVES TABLE

GRENADE OR EXPLOSIVE	TL	COST	DMG	ASPECTS
Dynamite	4	Cr75	3D	Blast 1D
EMP	8	Cr50	4D	Blast 5, Stun (Machines), Heavy: 2 AV hits
Flashbang	7	Cr30	3D	Blast 10, Stun
Fragmentation	5	Cr30	3D	Blast 5
HEAP	7	Cr50	5D	Blast 1, Heavy: 1 AV hit.
Incendiary	6	Cr30	3D	Blast 3, Fire
Molotov Cocktail	4	Cr5	2D	Blast 2, Fire
Plasma	13	Cr250	5D	Blast 5, Fire, Heavy: 2 AV hits
Plastique	6	Cr200	6D	Blast 10
Smoke	6	Cr15	-	Blast 10 (smoke)

GUNNERY WEAPON TABLE						
GUNNERY WEAPON	TL	COST	RANGE	AV HITS	PERSONAL DAMAGE	ASPECTS
Air-to-Air Missile	7	KCr50 / each	2000/4000	3	4D	
Anti-Tank Missile System	7	KCr15	500/2000	4	6D	Blast 3
Autocannon	6	KCr50	750/1500	1	4D	Auto 2, Blast 1
Cannon, Light	5	KCr30	500/1000	1	4D	Blast 2
Cannon, Heavy	6	KCr60	750/1500	2	5D	Blast 5
Cannon, Advanced	8	KCr120	750/1500	3	5D	Blast 5
Fusion Gun	13	KCr2500	3000/6000	6	10D	Blast 8, Fire
Laser Cannon	8	KCr150	1500/3000	3	6D	Laser
Laser Cannon, Advanced	9	KCr100	1500/3000	4	6D	Laser
Plasma Cannon	11	KCr750	750/1500	5	10D	Blast 5, Fire
Railgun	10	KCr75	2000/4000	3	8D	Blast 3

a Crossbow requires 2 actions to reload; a quiver holds 20 crossbow quarrels and counts as one encumbrance item.

Carbine (TL5): military longarm that uses a smaller caliber than a full-scale rifle. Carbines are lighter and shorter than rifles and are often employed as survival weapons.

Gauss Pistol and Rifle (TL12): These weapons accelerate small metal spikes to supersonic velocities. Though the principles behind their function have been understood since the early industrial age, Gauss weapons are typically beyond the manufacturing capabilities of frontier worlds. They do appear, from time to time, in the hands of well-equipped mercenary forces.

Gyrojet (TL8): Designed for use in zero-G environment, gyrojet weapons fire small, self-propelled rocket rounds. They have minimal recoil and work perfectly in hard vacuum.

Light Machine Gun (TL7): Standard mid-tech squad-level support automatic weapon, typically belt-fed. Considered as two items for encumbrance purposes.

Pulse Rifle (TL9): An advanced rifle firing electrically ignited, caseless, high explosive, armor-piercing rounds. Provides a high rate of fire and a large magazine capacity.

Revolver (TL4): Simple semi-automatic pistol using a manually loaded rotating drum to feed the bullets. A reliable weapon.

Rifle (TL5): a standard military firearm on low-tech worlds that uses a large caliber projectile. At higher TLs, up to and including TL9, such weapons often serve as dedicated sniper rifles.

Shotgun (TL4): A smoothbore weapon firing a "shot" palette capable of hitting multiple targets at once. They are effective short ranged weapons, but are not useful beyond effective ranges, or against armored targets. These particulate stats represent a pump-action weapon with an internal magazine.

Stealth Pistol (TL8): This is an especially light, discreet, and concealable weapon made from advanced polymers. A concealed body pistol can also be disguised as a number of more innocuous items, like comms, digital recorders, and so on.

Submachinegun (TL5): Light automatic weapon that fires pistol rounds. Submachinegun bullets are interchangeable with those of the autopistol; at the Referee's discretion, so are the magazines.

Tangler (TL12): A stubby, tube-like weapon using a gravitic launch system to deliver a capsule to its target. On a hit, the capsule erupts into a mass of adhesive tentacle-like strands, entangling the target creature and any other creature within a 5m radius. Any creature caught in the strands must roll STR 12+ to break out. The Tangler Gun creates enough strands to entangle a creature up to 500kg in weight; larger creatures are unaffected. On a failed roll, the target is immobilized and cannot act; they may attempt to free themselves each minute (10 combat rounds). Other characters can also cut entangled targets free using edged weapons. The Tangler comes with solvent capsules – which the weapon itself can launch as projectiles – which dissolve the tangling strands holding captives. Tangler strands hit with a solvent capsule will dissolve in one minute

Blasters (TL13): are advanced laser weapons with a compact, internal battery, which is also removable and rechargeable.

Laser Pistol (TL10): Handgun-sized directed energy weapon attached to a belt-mounted power pack. The pistol and its power pack are considered one item together. The powerpack is rechargeable from any major power source, such as a ship's powerplant.

Laser Rifle (TL9): Heavier version of the laser carbine, with better armor penetration, range, and even anti-

vehicular capabilities. Requires a rechargeable heavy backpack power unit, which counts as a separate item. It is rechargeable from any major power source, such as a ship's power plant.

Note that laser weapons suffer DM-1 to hit when used in environments with a great deal of particulates in the air, like sand, or ash. In these conditions, their ranges are reduced by half as well.

Plasma Rifle (TL16): The ultimate small arm, using miniaturized plasma gun technology to propel magnetically shaped pockets of super-hot plasma at its targets.

Stunner (TL10): Firing a precise electromagnetic pulse, this non-lethal weapon disrupts the target's neural processes, leading to stun and potentially unconsciousness.

Common Small Arm Accessories

The following accessories are commonly available for ranged weapons.

You may attach a **Bayonet (TL2)**, identical to a dagger in its game statistics on its own, to any rifle-sized weapon. A rifle with a bayonet serves as a melee weapon equivalent to a Spear (3D damage).

Laser Sight (TL7): the bonus for Aimed Shots increases to DM+2, but only within Effective range. The DM+3 limit on aimed shot bonuses to hit still applies. Cr100.

Scope (TL6): the weapon avoids the penalty for firing beyond effective range, as long as the character used the Aimed Shot action before firing. Maximum range still applies. Cr200.

Silencer (TL6): May be attached to any firearm. Silencers work for single shots, and short bursts, but never Full Auto attacks. Silencers provide a DM-4 to hear the gunshot sound. Cr250.

Smart Weapon (TL10): connects to a HUD or an implanted OmniComp. Grants DM+1 to all attacks. The Smart Weapon bonus is not cumulative with laser sights. This means that after one Combat Action aiming, the character can fire at DM+3. The DM+3 limit on aiming bonuses still applies. Cr1000.

All Heavy weapons can be mounted on a **Tripod (TL4)**, which negates their Bulky aspect. The weapon cannot be moved while mounted on a tripod. Tripods take 10 combat rounds (one minute) to set up. Cr100.

Secure Weapon (TL8): the weapon is fitted with biometric scanners that prevent non-authorized persons from operating the weapon. Any number of individuals may be authorized to operate the weapon, although the more authorized, the less secure the weapon. Hacking the security system requires a Computer/EDU 12+ throw. Cr500.

Common Heavy Weapons

The following weapons use the Heavy Weapons skill. All heavy weapons are considered 3 items each for encumbrance purposes. Ammunition belts, magazines, and individual rockets are each considered one item for encumbrance purposes.

Disposable Anti-Vehicle Rocket (TL7): A cheap, one-use, portable rocket launcher. Functions as an armor-piercing rocket, with 2 AV hits against vehicles.

Flamethrower (TL6): Spews a stream of fire 3m wide at its far end. All targets within this cone suffer damage and catch fire. The tank for the flamethrower holds enough fuel for five full attacks and counts as two items for encumbrance.

Fusion Gun (TL14): The advanced development of the plasma gun. This weapon fires plasma bolts undergoing microfusion for massive damage. It uses a back-mounted micro-fusion reactor and thus, for game purposes, has unlimited ammunition. The ammo cost in this case represents purchasing such a backpack. Note that the backpack and gun constitute 4 items in total for encumbrance.

GP Machinegun (TL6): A "General Purpose" belt-fed medium machinegun. Often carried on vehicles as a heavy weapon but is also man portable.

Grav Launcher: Advanced micro-gravitic technology allows this weapon to guide a floating plasma bomb to its target without having to account for ballistic trajectories or inertia. Once launched, the bomb travels 50m per combat round. Its operator can move it in any direction and can also stop it and have it hover in mid-air. Detonation is on command. The bomb's internal battery allows for 10 rounds of gravitic flight.

Grenade Launcher (TL7): Grenade launchers fire grenades over long distances. Grenades for a grenade launcher are not interchangeable with handheld grenades.

Grenade Launcher, Under-Barrel (TL7): this weapon increases the firepower of infantry. The under-barrel grenade launcher can be mounted under most two-handed firearms at TL7 or higher. It is not Bulky and can fire a single grenade before reloading. At TL10+, the weapon has a 3-shot magazine.

Guided Anti-Tank Missile (TL7): this is a portable guided missile system, like the AT-3 Sagger, or present-day Javelin or Eryx. These weapons must be fired from a fixed stationary position. However, the gunner need not be adjacent to the missile's firing position.

Light Assault Gun (TL8): Heavy anti-vehicle rifle firing large armor-piercing shells.

Plasma Gun (TL12): High-energy anti-vehicular man-portable weapon firing magnetically contained plasma

bolts. It requires a back-mounted, rechargeable power pack counting as two Items for encumbrance purposes.

Rocket Launcher (TL6): Man-portable rocket launcher utilizing unguided munitions. Rocket launchers are unsafe to use in enclosed spaces. Rocket payloads are considered high explosive and are not particularly effective against armored vehicles. Armor piercing rockets cost Cr500 per rocket: trade Blast 6 for 2 AV hits, Blast 1. An anti-aircraft homing missile (2 AV hits) costs Cr10000 and does not suffer a penalty when firing at fast-moving air vehicles.

Support Laser (TL8): Heavy directed-energy man-portable weapon for fire support and light anti-vehicular duties. Its back-mounted power pack counts as two Items for encumbrance purposes.

Grenades and Explosives

Throw Athletics/DEX 8+ to accurately throw a hand grenade within effective range, or Heavy Weapons/DEX 8+ to accurately launch a grenade from a launcher. The Effective range for thrown grenades is equal to the character's STRx2. Maximum range for thrown grenades is STRx4.

On a failed grenade attack, thrown grenades will deviate 2D + (the margin of failure) meters from its intended target, double that for grenades fired from a launcher. Beyond Effective range a thrown grenade automatically deviates 1D – (Effect) meters, regardless of the result of the attack throw.

Throw Demolitions/EDU 8+ to properly set up an explosive charge for simple demolition, or Demolitions/EDU 10+ or greater for more complex jobs, such as setting a directional shaped charge explosive.

Dynamite (TL4): Low-tech explosive made of nitroglycerin, sorbents (such as powdered shells or clay) and stabilizers. Used for demolition but can also be thrown with a lit fuse as a "grenade".

EMP Grenade (TL8): Electro-Magnetic Pulse grenade emitting a powerful magnetic pulse capable of disrupting electronics but harmless to organic beings. It causes full damage to robots. Characters with implanted cybernetics are vulnerable to EMP but only take half stun damage (rounded up) from it. Non-cybered organic beings are immune to this stun damage. This grenade counts as a heavy weapon (2 AV hits) for the purposes of damaging TL7+ vehicles.

Flashbang Grenade (TL7): Non-lethal stun grenade emitting a powerful flash and deafening noise upon detonation.

Fragmentation Grenade (TL5): Basic anti-personnel hand grenade exploding into a hail of shrapnel.

HEAP Grenade (TL7): High Explosive Armor-Piercing anti-tank grenade using a focused blast to penetrate armor. This grenade can only be fired from a launcher and counts as a heavy weapon (1 AV hit) for purposes of damaging vehicles.

Molotov Cocktail (TL4): Home-made incendiary bomb commonly made from a glass container filled with highly flammable liquid and lit with a fuse.

Incendiary Grenade (TL6): Military-grade fire-bomb grenade.

Plasma Grenade (TL13): A plasma explosive device in a grenade-sized package. This grenade counts as a heavy weapon for damaging vehicles (2 AV hits).

Plastique (TL6): This generic, multi-purpose plastic explosive is a favorite of military units, terrorists, demolition teams and adventurers across known space.

Smoke Grenade (TL6): Deploys a cloud of thick smoke upon impact. Apply DM-1 to all attacks passing through its Blast radius. They also apply a further DM-1 to laser weapons. The smoke stays in the air for 1D combat rounds.

Gunnery Weapons

The following weapons require a vehicular or fixed tripod mount. They use the Gunnery skill. Consider them as Gunnery Weapons when fired against vehicle armor.

Direct hits on personnel with Gunnery Weapons are automatically lethal, unless the target is wearing TL13 powered armor or equivalent, in which case, they take the Personal Damage listed here, normally. If the character is in the blast radius of a Gunnery Weapon, apply the Personal Damage normally, and see the rules on Diving for Cover in the Personal Combat chapter to maximize chances of survivability.

Air-to-Air Missile (TL7): this is a radar-guided or heat-seeking missile designed for use in air-to-air combat. TL8+ versions are self-guided suicide drones. These missiles can represent large surface-to-air missile installations as well.

Anti-Tank Missile System (TL7): A larger, vehicle or fixed-mount version of the guided missile heavy weapon, like the modern TOW or Hellfire missile. These missiles are very effective against slower armored vehicles.

Autocannon (TL 6): a rapid-fire cannon in the 20mm-30mm caliber range that is usually found mounted on aircraft and light vehicles. This weapon usually has enough ammunition for 10-20 short bursts.

Cannon, Light (TL5): a vehicle-mounted or towed gun in the 40-70mm caliber range, like the guns mounted on early Second World War tanks. They usually have between 40 and 100 shells in their magazine.

Cannon, Heavy (TL6): this large vehicle-mounted cannon is the main weapon of modern tank designs.

This also represents field guns and light indirect artillery.

Cannon, Advanced (TL8): the final evolution of chemically ignited direct fire heavy guns. Each projectile is an advanced charge that can be set to detonate in the air, upon contact, or designed to self-forge into an armor-piercing penetrator.

Fusion Gun (TL13): a large and bulky high-energy weapon that fires magnetically shaped bolts of plasma undergoing nuclear fusion. This weapon is powered by its own fusion reactor and thus has effectively unlimited ammunition.

Laser Cannon (TL8): the first battlefield energy weapon. This laser is more costly than an advanced cannon but has twice the effective range. Unfortunately for its operators, laser cannons suffer a DM-1 to hit when there is a large amount of particulates in the air.

Laser Cannon, Advanced (TL9): a fully developed, and thus cheaper, battlefield vehicle laser. It is still affected by particulates like all lasers.

Plasma Cannon (TL 11): The earliest high-energy weapon on the battlefield. The plasma cannon fires magnetically shaped plasma bolts that release enormous amounts of heat on the target. They are not long-ranged vehicle weapons.

Railgun (TL 10): an answer to newly developed laser cannon technology, the railgun fires a slug of nickel-alloy at hypersonic velocities. The weapon is cheap and has a very long range.

HAZARDS

Not all threats carry weapons. Starfarers must contend with disease, radiation, and extreme environments when exploring distant stars. This chapter provides simple rules for implementing these hazards in your game.

FATIGUE

Fatigue is common in the demanding sci-fi future. When Fatigued, a character suffers DM-1 to all throws. 8 hours of rest removes Fatigue.

DISEASE AND POISON

When a character is exposed to a disease or poison, they must make an Endurance throw. The target is the pathogen's Virulence number. If successful, the character shrugs off the effect. If the throw is failed, the disease damages the character's Stamina according to the listed damage. The infected character must repeat this throw after the pathogen's listed interval. Success means recovery and failure causes the listed damage, again. If this damage reduces the character's Stamina to zero, additional damage applies to Lifeblood. The character cannot heal any damage until they recover from the illness or poisoning. Note that most poisons

EXTREME TEMPERATURES TABLE

TEMPERATURE	DAMAGE	EXAMPLE
-100° or less	1D/round	Deep space
-50°	2D/hour	Mars
-25°	1D/hour	Arctic
-10° to 40°	None	Typical Terra
50°	1D/hour	Searing desert
100°	2D/hour	Boiling point
200° or more	1D/round	Mercury

SAMPLE PATHOGEN TABLE

PATHOGEN	VIRULENCE (END THROW)	DAMAGE	INTERVAL
Pneumonia	6+	1D	1D weeks
Anthrax	9+	1D	1D days
Biological Weapon	12+	3D	1D hours
Arsenic	8+	2D	-
Tranq Gas	10+	Unconscious	-

RADIATION EXPOSURE LEVELS TABLE

SOURCE	INSTANT (RADS)	EXTENDED (RADS)	EXAMPLE
Constant, low	-	1D/hour	Cosmic radiation
Constant, moderate	-	1Dx10/hour	Nuclear fallout
Constant, severe	-	1Dx100/hour	Solar flare
Acute, low	3D	-	Far nuclear blast
Acute, moderate	1Dx10	-	Particle Weapon
Acute, severe	1Dx100	-	Near nuclear blast

RADIATION SICKNESS TABLE

IRRADIATION	TOTAL RADS	END THROW	DAMAGE	INTERVAL
Mild	99 or less	None	None	None
Low	100-199	5+	1D	1D weeks
Moderate	200-599	6+	1D	2D days
High	600-999	7+	2D	1D days
Severe	1000-10000	8+	3D	1D hours
Extreme	10000 or more	12+	6D	1 hour

do not have an interval but cause their damage immediately upon poisoning and only once.

Extreme Temperatures

Extreme environments damage unprotected characters, as noted in the table below.

Fire

When exposed to fire, characters must throw DEX 8+ to avoid catching fire. A burning character takes 1D damage per round. Make another DEX 8+ throw each subsequent round; if successful, the character puts out the fire. If failed, the character suffers another 1D damage. Putting out the fire by other means, such as an extinguisher, also stops this continuous damage. Note that space suits, encased armor, and powered armor render their wearers immune to fire damage.

Falling

A character suffers 1D damage per 2m fallen, up to 6D at terminal velocity. Multiply this damage by the world's gravity rating in Gs. For example, falling 10 meters on a world with 0.45Gs would inflict 5D damage, which is then multiplied by 0.45 for the actual damage result – 2.5D rounded up to 3D. We remind Referees that even though falling damage is capped at 6D, falls from great heights are lethal. In those cases, do not roll damage.

Radiation

A character exposed to radiation accumulates rads. Unless treated with anti-radiation medication, this radiation exposure remains forever. Even after a character has recovered from radiation sickness (see below), accumulated radiation remains. Additional significant exposure will cause more severe sickness as any new exposure accumulates with all previous exposures before determining damage.

Exposure to radiation might lead to radiation sickness, depending on the amount of rads the character has accumulated. Use the disease and poison rules, in conjunction with the table below.

Starvation and Dehydration

A character requires two liters of water and 0.5kg of food per day to stay healthy. Special high-tech rations (TL8+) are a lightweight, though unappetizing substitute for food.

A character may go without water for 20 hours + twice their END score with no ill effect. After that time has passed, the character must throw END 6+ per hour without water or suffer 1D damage. There is a cumulative DM-1 with each additional check.

A character may go without food for 3 days. After that, the character must throw END 6+ per day without food or suffer 1D damage. There is a cumulative DM-1 with each additional check.

The character can recover this damage only after drinking and eating.

Suffocation

In cases of insufficient oxygen, such as on a ship with failing life support, characters suffer 1D damage per minute. If the character has no access to any oxygen whatsoever, like when a character is being strangled, or has been sucked out into space, the damage is 1D per round instead. A character can hold their breath for END combat rounds (6 seconds) without suffering from suffocation.

Vacuum Exposure

Contrary to popular belief, vacuum does not kill immediately. A character exposed to vacuum suffers regular suffocation damage (above). While exposed to space they also suffer 3Dx10 rads of radiation per round. Additionally, beginning from the third round of vacuum exposure, the character must throw END 10+ per round or fall unconscious from aeroembolisms – the formation of air bubbles in their bloodstream.

PERSONAL AND VEHICLE COMBAT

Spacers and adventurers often run into trouble among the stars. Hopefully, they'll be able to talk and negotiate their way out of problems. However, in many cases they will have to fight, be that for a cause, goal, or for survival. The following rules allow quick resolution of combats.

See the weapon descriptions in the Equipment chapter for various special Weapon Aspects and how to use them with these rules.

COMBAT PROCEDURE OUTLINE

1. Check for surprise. If one party surprises the other, they gain one free combat round during which the surprised party cannot act.
2. Determine Initiative for all combatants.
   3a. Start the combat round.
   3b. Combatants act in Initiative order (highest first).
   3c. On their turn, each character has two actions. They may use them for attacks, movement, and other actions. Apply any damage inflicted by an attack immediately.
3. Once the combat round is over, begin a new round, until the battle is over.
4. Combat ends. If necessary – triage and treat the wounded.

COMBAT ROUNDS

Combat takes place in 6-second segments called Combat Rounds. Characters act in descending initiative order, as discussed below, in each combat round – unless they are surprised or otherwise unable to act.

SURPRISE

Characters may surprise other parties or be surprised by them. A good tactician or a keen-eyed recon specialist can lay a good ambush or avoid one.

In situations where surprise is possible, each party throws Recon/INT 10+ or Stealth/DEX 10+. If one party succeeds and the other fails, the winner gains surprise. If both sides succeed or both fail, there is no surprise. A party deliberately setting up an ambush gains DM+2 to surprise rolls: ambushes require advanced knowledge of an approaching enemy, which is beyond the scope of the combat rules. Groups in vehicles, or groups of eight or more characters, suffer DM-2 to surprise rolls. Note that the DM-3 unskilled penalty applies here; if no one in a party has the Recon or Stealth skills, the party throws 2D-3 (modified by the higher between their INT and DEX DMs) for surprise.

Surprise grants a free combat round during which the surprising party may act, but the surprised party may not.

INITIATIVE

Once fighting begins, each combatant throws 2D + their Tactics skill (if any) + their INT DM. Record these rolls. In each combat round, characters act from the highest initiative score to the lowest. Note that the DM-3 unskilled penalty applies here; characters unskilled in Tactics throw 2D-3 + INT DM for initiative.

A character with Leadership may throw Leadership/INT 8+ at the beginning of combat; if successful, any characters in their parties may apply the throw's Effect as a skill bonus to initiative. Combatants may only benefit once from this effect. If multiple characters with the Leadership skill are present, only the one with the highest Leadership skill may roll.

OPTIONAL RULE: SIMULTANEOUS COMBAT

As an alternative to initiative-based combat, some groups prefer simultaneous combat. First, resolve any surprise/ambush opportunities. In all subsequent combat rounds, use the following rules:

First resolve all melee attacks and movement; they all occur simultaneously and cause damage simultaneously. For example, a character who succeeded in a melee attack and was then incapacitated by another melee attack will still cause damage to their target. Actions are declared in reverse DEX order: the lower DEX combatants must declare their actions first. This gives a minor advantage to characters with faster reflexes.

Second, after resolving all melee attacks, movement, and damage, resolve all ranged attacks, their damage, and non-movement actions in the same manner.

Note that this makes combat more dangerous and less predictable. It also provides an intentional advantage to melee combat to make it worthwhile to develop and use in a battlefield dominated by guns – to allow for cutlass-wielding cyborg pirates and similar characters!

ACTIONS AND ATTACKS

Each character has two actions in their turn. Characters may use an action as follows:

Attack: attack as described below.

Charge: run to a single enemy at a range of up to 20m and make a melee attack at DM+2. Characters

on Overwatch (see below) being charged at can, of course, react and attack the charging enemy. Those on Overwatch gain a DM+2 to hit charging opponents. Characters not on Overwatch also gain a free attack against a charging enemy, but at DM-2. Only one charge may be performed per round, and the character may perform no other action that round.

Inspire: throw Leadership/INT 8+ to add DM+2 to any single character's next throw.

Move: move up to 10m. Alternatively, fall prone or get up from a prone position.

Overwatch: delay your action until an enemy moves through your line of sight or attacks you. When this happens, you may immediately act, regardless of initiative order. You may hold your Overwatch for a number of rounds equal to your END score. Characters on Overwatch may elect to jump in front of an attack intended for another character within 10m.

Other Typical Actions include it is impossible to list all potential character actions. Instead, here are a few that can serve as guidelines to assist Referees in determining whether or not whatever the player wants to do is an action or would require more or less time.

- Drawing and readying a weapon
- Loading a weapon
- Forcing open a locked door
- Operating sensors
- Calling an artillery strike
- Trying to bypass a lock to open a bulkhead door
- Piloting a vehicle through difficult terrain
- Performing a stunt in a vehicle

Melee Attacks

To hit in melee (hand-to-hand combat), throw Melee Combat/STR 8+. You may not attack in melee with a longarm (such as a rifle) unless you use it as a cudgel (2D damage) or as a spear (3D damage with a bayonet). You may attack with a handgun (including shotguns and submachineguns) in melee at DM-2 to hit. Note that if a shield is used with the Overwatch action in combat, the wielder is treated as having partial cover, as noted below. This gives an enemy DM-2 to hit the shielded character in melee.

Ranged Combat

To hit a target in your weapon's Effective range, throw Gun Combat/DEX or Heavy Weapons/DEX (as appropriate) 8+. Beyond Effective range, throw 10+ instead out to maximum range.

Hitting an obscured target (such as behind bushes) is penalized by DM-1; when attacking a target behind hard cover, the penalty is DM-2; and for heavy prepared cover, such as a bunker, attacks are penalized by DM-3.

Attacks on a prone character in ranged combat are penalized by DM-2; attacking a prone character behind cover uses that cover DM instead, with an additional DM-1.

However, if a character enjoys a total cover DM of -4 or more, they themselves cannot make any direct fire ranged attacks. They are completely blocked by their cover. They may still attack, and be attacked, by means of indirect weapons like grenades.

Shooting in darkness incurs DM-2 to hit, while shooting in dim light incurs DM-1 to hit. These penalties can be alleviated by various night vision devices.

RANGED COMBAT DM TABLE

CONDITION	DM
Target obscured (smoke, foliage)	DM-1
Target behind hard cover	DM-2
Target in heavy cover	DM-3
Target running (double move on its previous round)	DM-1
Target behind total cover	DM-4; direct fire impossible
Target prone	DM-2
Target prone behind cover	Cover DM and an additional DM-1
Darkness	DM-2
Dim Light	DM-1
Target dodging (optional rule)	DM-target's Gun Combat skill

Aiming

An aimed shot requires two consecutive actions and grants DM+1 to hit. A character may use their first action in a combat round to aim, then enjoy DM+1 to hit when firing on the second action. Alternatively, it is possible to begin aiming as the second action in one round and continue aiming through the first action of the next round, and then make an attack with the second action of that second round. The maximum +Dm achievable by aiming is +3.

Automatic Weapons

Automatic weapons fire multiple rounds with every pull of the trigger, filling the air with a hail of bullets. A weapon with the Auto aspect can make attacks in three fire modes: single, burst, and full auto, as described below.

Single: Attacks are made using the normal combat rules.

Burst: Roll a number of D6 equal to the weapon's Auto score. Select the highest single die result and add it to damage. This uses a number of rounds equal to

the Auto score. Burst fire is only usable at Effective range or less..

Full Auto: Make a number of attacks equal to the Auto score. These attacks can be made against separate targets so long as they are all within six meters of one another. Full Auto attacks cannot benefit from a Gun Combat skill higher than level 1. Gun Combat skill levels of 2 or higher only count as level 1 when making Full Auto attacks. Combatants can also use Full Auto for Suppressive Fire (see below). Full auto uses ammunition equal to three times the weapon's Auto score. A weapon cannot use the Auto aspect with the Scope accessory or Aiming action. You may only perform one Full Auto attack in a given round.

Suppressive Fire

Instead of shooting a target, a character may fire an automatic weapon to deter enemy action in each area. Choose a 3m-by-3m area within effective range. Any combatants who move through this area, or who are caught in this area, suffer an automatic attack. However, do not apply the shooter's Gun Combat skill to this attack and apply a further DM-2 to it. Thus, such shots hit a suppressed target in Effective range on 10+, or 12+ while in cover – combatants under suppressive fire better keep their head down! This continues until the weapon runs out of ammo or until the shooter's next round. This consumes ammunition equal to three times the weapon's Auto rating.

NPCs who are under suppressive fire must make a Morale check. If this forces them to Break, they suffer a suppressive fire attack!

You may only perform one Suppressive Fire action per round.

Thrown Weapons

Thrown weapons an Effective range of the thrower's STRx2 characteristic; the Maximum range is STRx4. Throw Athletics/DEX 8+ to hit with a thrown weapon at Effective range, or 10+ beyond it.

Grenades

Throw Athletics/DEX 8+ to accurately throw a hand grenade at a target at Effective range, and Athletics/DEX 10+ to place a grenade on target at maximum range. Unless the target is in a prepared position, the maximum cover modifier applicable to grenade attacks is DM-2. If the attack misses, the grenade will deviate by 2D + (Margin of Failure) meters from its intended target. Beyond Effective range, grenades deviate 4D + (Margin of Failure) meters. The maximum possible deviation is half the range it was thrown. For example, a grenade that is thrown at a target 10m away cannot deviate more than 5m from its target.

Blast Effects and Diving for Cover

Modern weaponry includes a wide variety of highly lethal explosive devices, like grenades (see above) and Gunnery weapons. Weapons with the Blast Weapon Aspect do their full damage to everyone within the blast radius. It is possible to reduce this damage by Diving for Cover. The character flings themselves down onto the ground: reduce damage by half, before applying armor. If there is sufficient cover readily available, the character can dive behind it and take only 1D damage before applying armor. What constitutes sufficient cover depends on the explosion and the Referee's call. A foxhole or slit trench might be sufficient to avoid grenade blast damage altogether. Hiding behind a low brick wall might only serve to increase the amount of shrapnel from an exploding artillery shell. Fusion guns tend to ignore most types of matter. The Referee is the final arbiter in these situations. In any case, a character that dives for cover forfeits their next action.

Optional Rule: Dodge and Parry

Even though they cannot dodge bullets, skilled combatants are harder to hit. A proficient gunman can use the battlefield to avoid line-of sight. An expert swordsman will parry melee attacks. Therefore, for a more cinematic game where skilled heroes can take on multiple armed opponents, we propose the following optional rule. In ranged combat, apply the target's Gun Combat skill (if any) as a negative DM to all incoming ranged attacks. In melee combat, apply the target's Melee Combat skill (if any) as a negative DM to all incoming melee attacks. Immobile or unaware targets do not enjoy this defensive benefit. Note that this modifier is not cumulative with any cover modifiers; use the higher of the two modifiers when shooting at a target in cover. The exception is a shield – a character using a shield in melee may still add DM-1 to be hit by enemies to the above penalty if they used one of their actions in the previous round for Overwatch with the shield.

Grappling

A character can attempt to wrestle or grab another person instead of hitting them. The attacker must move to melee combat range and beat their target in an opposed Melee Combat throw. If the attacker wins, they may do any one of the following:

- Knock their opponent prone.
- Disarm their opponent. If the attacker succeeds with an Effect of 6+ they can take the weapon for themselves; otherwise, it ends up on the floor.

- Throw their opponent up to three meters for 1D+STR DM damage.
- Inflict damage equal to 2 + the Effect + STR DM. Grapple damage ignores armor except for Encased Armor Suits, Powered Armor, and Hostile Environment Spacesuits.
- Escape the grapple and move away (as if with a normal movement action).
- Continue the grapple with no other effects.
- Drag or push their opponent up to three meters.

Throwing an opponent always ends the grapple. When using any of the other options above, the winner of the opposed test can choose to end or continue the grapple as they see fit, even if they did not initiate it. A character in a grapple cannot move or do anything other than make opposed Melee checks. Each time an opposed check is made the winner can choose an option from the above list. A character who won the grapple in the previous round enjoys DM+1 to the next grapple; this is not cumulative regardless of the number of grapples they have successively won.

DAMAGE

To determine the amount of damage a successful hit inflicts, check the weapon's damage rating. Each weapon has a number of damage dice: roll them, add the attack throw's Effect. In melee attacks or when using thrown melee weapons, add the character's STR DM to the damage (for a minimum of 1 damage in case of a negative STR DM). This is the damage inflicted on the character.

ARMOR

Subtract the armor's Armor Rating from any physical damage caused to the character before applying the damage to the character's Stamina and Lifeblood.

OPTIONAL RULE: ARMOR AS A PENALTY TO HIT

Armor in the core Cepheus Deluxe rules absorbs damage. However, some players and Referees prefer armor to render its wearer harder to hit, rather than absorb damage. For such groups, we present the following simple rules.

The above modifiers are penalties to hit. All other modifier DMs to hit, like Cover and Darkness, apply as usual. Under this optional rule, of course, armor does not reduce damage; any hit causes regular damage dice without any reduction.

WEAPON NOTES

Shotguns (+2) against jack or less in effective range. Treated as a slug weapon.

Natural Weapons include Hands, Claws, Teeth, Horns, Hooves, Stingers, and Thrashers, or any similar bodily weapon.

Bludgeoning Weapons include Clubs, Batons, and so on.

Piercing Weapons include Bayonet, Spear, Halberd, Pike, Foil, Bows, and similar.

Slashing Weapons include Dagger, Blade, Cutlass, Sword, Broadsword, etc.

Slug Weapons include Body Pistol, Handgun, Revolver, Carbine, Shotgun, SMG, and similar light small arms.

Assault Weapons include Rifles, Assault Rifles, Gauss Rifles, Pulse Rifles, Light Machine Guns, and similar rifle-scale small arms.

Lasers include all laser-based weapons, including Blasters.

Heavy Weapons include GMPGs, explosives, Plasma Weapons, Fusion Weapons, and similar heavy weapons.

ARMOR AS A PENALTY TO HIT TABLE

ARMOR TYPE	NONE	LEATHER JACKET	BULLET-PROOF VEST	HEAVY BALLISTIC	SPACE SUIT	HEAVY DUSTER	ENCASED OR SYNTH SILK	POWERED ARMOR
Natural Weapons	0	-1	-2	-3	-3	-2	-4	-5
Bludgeoning Weapons	0	-1	-2	-3	-3	-2	-4	-5
Slashing & Piercing Weapons	0	-1	-3	-2	-2	-3	-3	-5
Slug Weapons	0	0	-1	-3	-3	-1	-3	-5
Assault Weapons	0	0	0	-1	-1	0	-2	-4
Laser Weapons	0	0	-2	-2	-2	-2	-3	-5
Heavy Weapons	0	0	0	0	0	0	-1	-3

APPLYING DAMAGE

Cepheus Deluxe uses two attributes to denote a character's resistance to damage. The first is Stamina, which represents the character's toughness and ability to shrug off minor wounds. Lifeblood is the character's health: loss of Lifeblood represents more serious damage.

After any successful attack, apply damage, after first subtracting armor. All damage is first applied to the target's Stamina. After Stamina reaches zero, any excess or additional damage is then applied to the target's Lifeblood.

KNOCKDOWN

If a character receives more damage, before armor is applied, in one round than their DEX score, they are knocked prone. This rule applies even when the character otherwise receives no damage at all thanks to armor. Characters in Powered Armor quadruple their DEX for calculating their knockdown threshold.

WOUNDS

If Stamina is above zero, the character is not wounded, only bruised, or scuffed. No negative effects apply to the character in this case.

If the character suffers Lifeblood damage, but their Lifeblood is above one half its full rating, the character suffers a Minor Wound and applies DM-1 to all actions until healed.

If Lifeblood falls below half its full rating, the character is Seriously Wounded; they must throw END 8+ or fall unconscious for 1D hours. Upon waking, the character suffers DM-2 to all actions until healed. The character will require medical care to recover any further.

Characters suffer a Mortal Wound if their Lifeblood reaches zero. A mortally wounded character will die within 1 hour unless they undergo Trauma Surgery, as described below. In extreme cases, when the character suffers massive damage, the Referee may declare that they die immediately.

MORALE

While player characters can always choose when to fight and when to retreat, the Referee determines when NPCs surrender or retreat from combat. NPCs fighting on the PCs' side as allies also use the following Morale rules.

All NPCs, including non-sentient creatures, have a Morale DM which represents how likely they are to fight or flee under duress during an encounter. Most trained soldiers have a Morale DM+0; they will fight well under normal conditions but will usually avoid fighting to death and will retreat from combat if outmatched. A non-combatant or a coward will have Morale DM-2 or worse; loyal allies can have Morale DM+2 or better. The Referee can add additional modifiers to the Morale throw, depending on the situation. Players are encouraged to use their PC's skills to affect their enemies' and allies' Morale Modifiers. For example, before a battle, the Referee may rule that a PC with the Leadership skill can roll Leadership/SOC 10+ and apply the Effect as a Morale roll modifier once per battle. The Referee should encourage the player to make a heroic speech, or other grand gesture.

MORALE TABLE

2D	RESULT
5 or less	Break
6-8	Fighting Withdrawal
9-15	Keep Fighting
16+	Fight to the Death

The Referee usually makes a morale throw for each NPC, or group of NPCs or creatures, for larger fights, in one of two cases:

- When the NPC's side in the encounter has taken a casualty;
- When half of the NPC group is killed or incapacitated.

If both events occur on the same round, make the morale throw with a further DM-2.

When checking morale, throw 2D with the abovementioned DMs and consult the following table:
Retreat: the NPC will break and run away from the enemy, using both actions in their next round to run. If running is not possible, the NPC will throw down any weapons and surrender, begging for mercy.

Fighting Withdrawal: the NPC will use one action in their next round to move away from the characters, but will use the second action for Overwatch, or, if pursued, to attack. The NPC will continue to retreat or withdraw until they are no longer pursued by enemies. If there is no way to escape, the NPC will attempt to surrender, and will fight only as a last resort – if their surrender is not accepted and the enemy presses on with fighting.

Keep Fighting: the NPC will continue fighting but will not pursue if the opponent flees.

Fight to the Death: the NPC keeps fighting and will be immune from any further Morale throws in this battle.

THE LEADERSHIP SKILL AND MORALE

Once per battle, characters with the Leadership skill may throw Leadership/SOC 10+ to mitigate a failed Morale roll by one level. On a successful throw, a Break turns into a Fighting Withdrawal, and a Fighting Withdrawal turns into a Keep Fighting result.

Optional Rule: Heroes and Grunts

For a cinematic game where heroes cut their way through waves of grunts (also called mooks, or occasionally "extras"), the Referee may rule that, in personnel combat, any attack penetrating armor knocks a grunt out of combat. This rarely means death unless the damage is massive. However, in such heroic tales, grunts often cower after being hurt, are preoccupied by their (sometimes minor) wounds, or pass out after being hit by the hero. Reviving such mooks for interrogation after combat is often easy, though the information available from them is usually limited.

Healing and Medical Care

Stamina recovers on its own to its full rating with 10 minutes of rest. A character's stamina recovers even if they have received Minor Wounds. Stamina does not recover for characters who receive Serious or Mortal Wounds.

Minor Wounds require treatment by a character with at least Medicine-1, a Medkit, and 30 minutes of time. With either Medicine-1 or a Med Kit, rather than both, treatment will take 1 hour. Alternatively, characters will recover from all Minor Wounds on their own after a full day's rest. This will restore the character's Lifeblood to its full rating.

Serious Wounds require a medical facility—a standard starship medbay will suffice—and treatment by a nurse or a physician (Medicine-2 skill or better). Recovery takes 1 day per point of Lifeblood below half the full Lifeblood rating. Once the character's Lifeblood reaches half its full rating, the character will recover the other half within another day of treatment.

Mortal Wounds require Trauma Surgery, as noted below.

Trauma Surgery

The key to trauma surgery is to bring the mortally wounded character to a hospital within the "Golden Hour" of trauma medicine – that is, within one hour after receiving a mortal injury. Even with advanced first aid, critically injured characters whose Lifeblood was reduced to zero will not survive without trauma care after an hour of injury.

TRAUMA SURGERY TABLE	
2D	RESULT
5-	Death
6-7	Significant internal damage
8-10	Radical measures required
11+	Normal recovery

Ordinary medbays common on most starships will usually not suffice – a dedicated hospital, whether shipboard or planetside, is the only facility capable of performing such medical operations safely. If no hospital is reachable within one hour, a character with the Medicine skill may attempt field surgery, but, as noted below, this applies a significant penalty to the roll. Also note that characters killed by gunnery-scale or starship-scale weapons cannot be resuscitated.

Once on the operating table, the surgeon treating the critically injured character throws 2D + their Medicine skill, modified by the DMs below, and consults the following table.

Trauma Surgery DMs

DM-2 if no first aid was provided within 10 minutes of the injury.

DM-2 if operating in a ship's med bay, and not a proper hospital.

DM-4 if operating under unsuitable field conditions.

DM-2 if treated with TL6- equipment-; DM+2 if treated with TL12+ equipment.

DM-2 if Mortally Wounded by an explosion/blast.

DM-2 if patient has END 5-,

DM+2 if patient has END 10+.

DAMAGE EFFECTS AND RECOVERY SUMMARY TABLE			
DAMAGE SUFFERED IS...	WOUND STATUS	WOUND EFFECTS	RECOVERY
Stamina only	Scratched	None	10 minutes of rest
Less than half Lifeblood	Minor Wounds	DM-1 to actions	Medicine 1 or medkit, and 30 minutes.
More than Half Lifeblood	Seriously Wounded	Roll END 8+ to stay conscious; DM-2 to all actions	Medbay, 1 day/point of Lifeblood below half.
Lifeblood = 0	Mortal Wound	Die in 1 hour	Trauma Surgery!

Trauma Surgery Results

Patient is dead: character dies on the operating table. No further resuscitation attempts possible. However, see Cyborg Conversion and Bio-Reconstruction, in Appendix XX.

Significant internal damage: multiple organs severely damaged. Permanently subtract 1D from each physical characteristic. If any of them reaches zero or less, the character dies.

TL9+ vat-grown or cybernetic organs restore full functioning and cost 1D x Cr2500 – no throws required.

R**adical measures required**: Throw 1D:

1: internal organ removed. Permanently reduce one physical characteristic by 1D. Character dies if it reaches zero or less.

TL9+ vat-grown or cybernetic organ restores full functioning and costs Cr2500 – no throws required.

2-3: leg amputated. Movement halved (given a crutch) and the character may either act or move during a given round.

4-5: arm amputated. The character obviously cannot use this arm for any purpose.

6: eye removed. DM-2 to all actions requiring one eye, including all attack throws.

See the Cybernetics section of the Equipment section for replacement options for any amputated limbs.

Normal recovery: heal as normal for a Seriously Wounded character.

Personal Combat Example 1: Rumble in the Docks

On a backwater planet, Jackie and Ennik were conducting business with a local merchant. Unfortunately, the merchant neglected to tell the off-world traders that the local criminal underworld was watching him. While Jackie and Ennik were in the back alley loading dock inspecting the pallets of freight they had agreed to transport, a small group of thugs arrived to shake down the traders. Fortunately, the pair of offworlders had been expecting trouble…

Both sides roll Recon/INT or Stealth/DEX 10+ for surprise.

Ennik's roll is 9 + 1 (Recon) + 1 (INT DM) = 11

The Thugs have Stealth 0, and thus roll 8 + 1 (DEX DM of the boss) = 9

Ennik heard the thugs out front harassing the merchant, and he signaled to Jackie that they're about to have company. They quickly found hiding places in the loading dock, and when the thugs arrived with pistols out to rough the offworlders up, Jackie and Ennik jumped them!

Rumble in the Docks: The Cast

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Ennik Kazzov	**6**	**7**	**9**	**10**	**8**	**6**	**18**	**9**

Relevant Skills: Athletics 0 Gun Combat 0, Medicine 1, Melee Combat 0, Recon 1
Relevant Traits: Combat Medic
Equipment: Gyrojet Pistol with Smart Gun (2D), Synthsilk Armor (8), Implanted OmniComp

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Mad Jackie" Botrel	**6**	**9**	**7**	**8**	**9**	**4**	**16**	**8**

Relevant Skills: Athletics 1, Gun Combat 1, Leadership 1, Melee Combat 3, Tactics 2
Relevant Traits: Signature Weapon (Internal Blade)
Equipment: Internal Weapon Cybernetic (Blade, 2D), Autopistol (2D), Heavy Duster (3)

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Petty Thug x 4	**9**	**8**	**7**	**6**	**4**	**4**	**16**	**8**

Relevant Skills: Athletics 1, Gun Combat 0, Melee Combat 1, Stealth 0
Equipment: Pistol (2D), Stun Prod (2D), Leather Jacket (2)

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Gang Boss x1	**8**	**9**	**10**	**8**	**8**	**5**	**22**	**11**

Relevant Skills: Athletics 1, Gun Combat 1, Leadership 1, Melee Combat 1, Streetwise 2, Tactics 1,
Equipment: Pistol (2D), Knife (1D), Leather Jacket (2)

Round 1:

Surprise round for Ennik and Jackie.

Ennik has his gyrojet pistol ready, aims (first action), and fires (second action) at a thug holding a pistol. He rolls 6 + 1 (aiming) + 1 (Smart Gun) = 8 a hit at the close range of the loading dock with an Effect of zero. He does 2D = 9 points of damage. The thug's leather jacket reduces the damage by 2 points to 7 damage. Just a flesh wound. However, the 9 points is enough to knock the thug over as he yelps in agony.

Jackie steps out from behind a cargo container and stabs the gang boss in surprise as her internal cyber-blade pops out! Jackie rolls 7 + 3 (Melee Combat) + 1 (DEX DM) + 1 (Signature Weapon) = 12, for an Effect of 4. The damage is (2D) 10 + 4 (Effect) = 14, which is reduced to 12 points because of the boss' cloth armor. She then tucks back behind the cargo container (second action). The thug boss falls over, screaming in pain, suffering a Light Wound. He will suffer a DM-1 to all future rolls.

Round 2:

Now the combatants roll Initiative:

Jackie rolls Tactics/INT: 8 + 2 (Tactics) = 10

Ennik rolls Tactics/INT: 6 – 3 (Unskilled) + 1 (INT DM) = 4

The gang boss rolls Tactics/INT: 5 +1 (Tactics) -1 (Wound) = 5

The thugs roll collectively Tactics/INT: 10 – 3 (Unskilled) = 7

Jackie and the boss also get to roll Leadership/INT 8+ to boost their friends' initiative throws:

Jackie rolls 9 + 1 (Leadership) = 10 for an Effect of 2. Ennik's new initiative is 6.

The gang boss rolls 11 + 1 (Leadership) -1 (Wound) = 11 for an effect of 3. Growling a throaty battle cry, the boss is inspirational, even after being stabbed! The thugs have a new initiative score of 10. Uh oh.

Initiative 10: The thugs fan out and take whatever cover is available (first action). This includes the one on the floor, who scrambles away after being shot in surprise. Two of them fire on Ennik, who they can see (second action). They roll 7 + 0 (Gun Combat) – 2 (target in cover) = 5 and 11 – 2 = 9. One of the thugs manages to hit with Effect 1! Damage is 11 + 1 = 12, which knocks Ennik over, but he only takes 4 points of damage to his Stamina because of his high-tech armor. The third thug covers his boss (Overwatch), waiting to see what Jackie does.

Initiative 10: Jackie whips around the cargo container to grab the injured boss and attempts to drag him out of sight for some one-on-one negotiations. As she does this, this trigger's the last thug's Overwatch. He fires a shot at her rolling a 6 + 0 (Gun combat) = 6, a miss. Jackie's movement is her first action, and her second is the grapple. She rolls 9 + 3 (Melee Combat) = 12, and the gang boss opposes with a 7 + 1 (Melee Combat) = 8, and she drags him behind the cargo container.

Initiative 6: Ennik winces, gets up, and scrambles to cover again (first action) and then fires his gyrojet pistol: 9 + 1 (Smart Gun) – 2 (cover) = 8, another hit. He does 9 damage to another goon, who only takes 7 points of damage, but is knocked over.

Initiative 5: The gang boss is now grappled and must now try to defeat Jackie in an opposed Melee Combat test to act he rolls 8 + 1 (Melee Combat) – 1 (wound)= 8, and Jackie rolls 8 + 3 (Melee Combat) = 11. Even though it's not her turn, Jackie gets to choose an effect, and decides to disarm her opponent. The pistol falls to the floor. The boss is trapped in a grapple with a superior opponent, out of sight of his goons!

Round 3:

Initiative 10: The thug Ennik hit last round gets up behind cover (first action) and fires again (second action), rolling 3 – 2 (cover) = 1, a miss. The second thug fires on Ennik twice, rolling 4 – 2 (cover) = 2 and 4 – 2 (cover) = 2, both misses. The third thug calls out for his boss, and hearing no response, fires once on Ennik (first action) and moves towards the last place the boss was seen (second action). The attack is 7 – 2 (cover) = 5, a miss.

Initiative 10: Jackie's player would like to end the fight by intimidating the gang boss and says that Jackie is going to extend her cyber-blade in a menacing way at the boss. The Referee agrees on the condition that Jackie wins the grapple check. The roll is 7 + 3 (Melee Combat) + 1 (Won previous grapple) = 11 compared to the boss' 8 + 1 (Melee Combat) = 9.

Jackie whispers quietly to the man she's got in a choke hold with a knife to his throat: "I'm Mad Jackie Botrel, captain of the One-Eyed Jack. You should tell your men to stop shooting."

Initiative 6: Ennik can see one thug moving,, so he aims (first action) and fires at him (second action). The rolls is 5 + 1 (Smart gun) + 1 (Aiming) = 7, which misses. Ennik's smartgun reminds him that he's fired 3 rounds and has 5 left. He makes a mental note to shut down the smart gun's "helpful audio reminder" feature if he lives through this.

Initiative 5: The boss swallows hard, "I've never heard of you," replies the boss, "but nevertheless, I concur."

Personal Combat Example 2: Suppressive Fire and Grenades

The more military-minded members of the crew of the One-Eyed Jack have been loaned out to a group of rebels on a TL5 feudal tyranny. Unfortunately, while the rebels and the offworlders were planning a new spree of freedom fighting, government troops attacked

the rebel base! All around are the shouts and screams of the dying, as government forces break through the defensive perimeter. Two of the crew of the One-Eyed Jack, Markus Baldhof and Cinta Koplow, are in the radio hut, attempting to signal their ship to effect a daring rescue. Markus is operating the radio. Meanwhile, Cinta takes cover at the fortified entrance, looking for threats. Suddenly, a squad of government soldiers appear nearby and see him!

Since the battle has already begun, there is no need to roll for surprise. The initiative results are as follows:

Markus rolls Tactics/INT: 9 + 0 (Tactics) = 9

Cinta rolls Tactics/INT: 7 + 1 (Tactics) = 8

Government Forces roll Tactics/INT: 7 – 3 (Unskilled) = 4

Round 1:

Initiative 9: Markus works diligently to contact the ship. He rolls Computer/EDU: 4 + 3 (Computer) = 7, which is not enough to cut through the jamming and distortion! "They're jamming all frequencies!" he calls out to no one in particular.

Initiative 7: Cinta sees at least a half dozen men moving between the tents and bunker entrances that make up this supposedly hidden rebel base. He knows that Markus will need more time to contact the One-Eyed Jack for a hot extraction. He brings the machinegun to bear and lays down a murderous burst of suppressive fire!

The Referee rules that there are 1D+3 = 4 men caught in the burst. They are obscured (DM-1), but not behind any real cover. This means that the target to hit them is 10 (Suppressive Fire base target). The four targets each suffer an attack throw, which are: 6 – 1 (Obscured) = 5, 6 – 1 (Obscured) = 5, 9 – 1 (Obscured) = 8, and 7 – 1 (Obscured) = 6. No hits, but these soldiers must make a Morale check: 6 + 0 (Trained Soldiers) = 6, which is a Fighting Withdrawal.

Initiative 4: the four men caught in the hail of suppressive fire are pinned down and prone, and while they are not interested in fighting anymore, they have also retained enough of their wits to not panic and run.

The other two men in the squad who were not suppressed take cover (first action) and then fire their rifles at Cinta. They roll 8 + 1 (Gun Combat) – 3 (Heavy Cover) = 6, and 9 + 1 (Gun Combat) – 3 (Heavy Cover) = 7, both misses.

The Referee notes that the GP Machinegun has a 100-round magazine, and just expended 12 bullets on that suppressive fire attack.

Round 2:

Initiative 9: Markus enters a zen-like state as he focuses on breaking through the low-tech jamming that is usually beneath him. He rolls a 9 + 3 (Computers) = 12, which is enough to establish a comms connection to the One-Eyed Jack. "Hi everyone. We're being attacked by a lot of government soldiers. The secret rebel base is not so secret. Can you come rescue us?" Markus does not wait for a reply, and heads for the entrance near Cinta, shouldering his submachinegun.

Initiative 7: Cinta's suppressive fire attack ends. He nods as Markus arrives: "wait until they move, and then shoot." He then opens up with another Suppressive Fire attack, catching the same group of four soldiers.

Initiative 4: The government troops are not elite, but they've had some training. The group of four that are now engaged in a Fighting Withdrawal throw a smoke grenade to cover their withdrawal and try to crawl behind cover. The movement triggers suppressive fire attacks on them: 5 – 1 (Obscurement) = 4, 7 – 1 (Obscurement) = 6, 5 – 1 (Obscurement) = 4, and 11 – 1

SUPPRESSIVE FIRE AND GRENADES: THE CAST

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Markus Baldof	6	9	6	10	9	6	12	6

Relevant Skills: Athletics 0, Computer 3, Gun Combat 0, Tactics 0
Equipment: Submachine Gun (2D, Auto 3), Synthsilk Armor (8)

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Cinta Koplow	9	9	10	7	5	5	22	11

Relevant Skills: Athletics 1, Gun Combat 2, Heavy Weapons 2, Melee Combat 3, Tactics 1
Equipment: Encased Armor (AR 9) assault rifle (3D, Auto 2), GP machinegun (3D, Auto 4, Bulky), Machete (2D)

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Government Troops	7	7	7	7	7	5	14	7

Relevant Skills: Athletics 1, Gun Combat 1, Melee Combat 1
Equipment: Rifles (3D), 1x Smoke and 1x Fragmentation Grenade (3D) each

(Obscurement) = 10. One hit for 9 damage, which is enough to deplete the soldier's Stamina and give him a Minor Wound. Now the soldiers are prone behind cover and are going to withdraw.

The other two soldiers, however, decide to eliminate the machinegun position. They each ready a frag grenade (first action) and then throw a frag grenade, rolling 7 + 1 (Athletics) – 2 (Max Cover DM for grenade attacks) = 6, and 8 + 1 (Athletics) – 2 (Cover) = 7. Both grenades miss. The first deviates by (2D + Margin of Failure) 5 + 3 = 8m, the second by 3 + 1 = 4m. This means that both Markus and Cinta are in the blast radius of one grenade! This does 3D = 7 damage, which the Referee rules is reduced by half to 4, because both characters are already behind heavy cover, and the grenade missed. Both characters remain standing (4 damage is less than DEX of 9). Their ears are ringing, but neither are hurt: their armor absorbed all the shrapnel and concussion.

Round 3:

Initiative 9: Markus spots the two soldiers attacking his and Cinta's position. He fires a burst at each for his two actions. He rolls 6 + 1 (DEX) = 7, and 12 + 1 (DEX) = 13, missing the first, but hitting the second soldiers. The damage is 2D = 11 + 5 (Effect) + 6 (3D choose the best die) = 22 damage, which kills the soldier instantly.

Initiative 7: Cinta fires a burst at the remaining soldier rolling 5 + 1 (DEX) + 2 (Heavy Weapons) – 1 (Target Behind Cover) = 7, a miss. He burst fires again, rolling 7 + 1 (DEX) + 2 (Heavy Weapons) – 1 (Target Behind Cover) = 9, a hit. This does 3D = 11 + 1 (Effect) + 4 (4D choose the best die) = 16, which knocks the soldier over, depletes his Stamina and gives him a Serious Wound.

With the threat temporarily removed, Cinta turns to Markus, "I hope the Jack gets here soon, before they bring real firepower to bear…"

VEHICLE COMBAT

Sometimes, characters will find themselves operating a vehicle in combat, or facing enemy vehicles. The following rules allow the inclusion of vehicles in personal combat, as well as vehicle chases. They are not intended to serve as war-gaming rules for large engagements.

VEHICLE MOVEMENT

In tactical (non-chase) combat, a vehicle moves on its driver's initiative. Apply the vehicle's Agility as a DM to the driver's initiative.

In personal combat, a vehicle can move up to 20m in a single round. This is considered cautious combat movement. This represents a vehicle advancing slowly through terrain to engage personnel and other vehicles at so-called "knife-fighting" ranges and speeds. Fast-moving vehicles will pass through the tactical battle area in a round, or less. The chase rules below are designed to handle such high-speed combats. An exception would be a one-time intervention of a fast vehicle in tactical combat, such as an armed aircar doing a quick laser strafe of enemy positions during its pass through the area.

CHASES

The tactical combat rules represent action in small, limited areas. For vehicles, this means short range and slow speeds. As noted above, a fast-moving vehicle will easily pass through the entire tactical combat map in less than one combat round. This is unsuitable for chases and dogfighting. Use these rules instead in such cases. They are designed to be highly descriptive in their approach to vehicle combat. It will be up to the Referee and the players to describe how the action unfolds as the participants maneuver, jockey for position, and attack each other.

Chase turns are an abstraction in combat and vary in length depending on circumstances, from mere seconds in high-speed aircraft pursuits to hours in long drawn-out submarine duels. The Referee should inform the players of how long each chase combat turn is at the start of the chase.

There is no initiative throw in chases. Instead, at the start of each turn both participants throw 1D + the relevant Vehicle Skill + Attribute DM + the vehicle's Agility. The pursuer wins on ties. The attribute DM used in vehicle chases depends on the vehicle and context: most high-speed chases would use the DEX DM, while a naval duel might use INT or EDU—perhaps depending on the Tech Level, ranges, and vehicles involved.

The result of the 1D + Attribute DM + Vehicle Skill + Vehicle Agility is called the Position.

The participants in a chase can only attack those targets at an equal or lower Position. They may attack using the normal vehicle attack and damage rules, with the following modifiers based on the relative Position between the attacker and target.

Those vehicles in lower Positions cannot attack any vehicle with higher Position for that turn unless their vehicle has a turret-mounted weapon. Turret attacks made from a worse Position suffer DM-3 to hit. Note that there is no range tracking in these vehicle chase rules. This is intentional. The attack DM penalty for low-relative Positions reflects a bad angle of attack, or sub-optimal range for an attack, such as getting an enemy on your tail in aircraft dogfighting.

It is possible to have multiple parties engaged in a chase. Simply record the different Position results in descending order. The vehicles higher on the "ladder" may attack any vehicle below them, subtracting

Positions to determine their Attack DM. This can be used to great effect in a dogfight, below.

Chases last five turns. At the end of the fifth turn, if the prey has not been stopped, disabled, or destroyed, the prey escapes and the chase ends.

POSITION ATTACK DM TABLE	
ATTACKER IS	DM TO ATTACK THROWS
In the same Position as the target	DM-2
1 or 2 Positions higher than the target	DM-1
3 or 4 Positions higher than the target	DM 0
5 or more Positions higher than the target	DM+1

DOGFIGHTING

In a dogfight, two or more highly maneuverable vehicles, such as aircraft or grav vehicles, try to outmaneuver and fight each other. Unlike a chase, a dogfight usually has no time limit, barring fuel considerations. The dogfight ends either when one participant is disabled or destroyed, or if one participant disengages. To disengage from a dogfight, a participant must use an action that turn to throw Opposed Vehicle Skill/DEX, including the DM for the vehicle's agility. The vehicle with superior Position gains Advantage on the skill check. If the pilot that initiated the disengagement attempt was successful, they have managed to end the dogfight, and cannot be attacked without first being chased down and re-engaged. For example, a fighter aircraft can break off the fight, and will be free to go its way unless its opponent gives pursuit.

FOOT CHASES

Chases on foot use similar rules. Each turn, each side throws opposed Athletics/DEX skills and records the result as their Position. The pursuer wins on ties. The winner of this opposed throw may attack in melee or ranged combat, at the Referee's discretion, while the loser cannot attack in that turn. Use the same Position Attack DM table as vehicle chases. Foot chases end in the same way that other chases end, that is, either when the pursuer subdues the prey or gives up the chase, or after five turns, when the prey escapes. Referees should track the number of turns and remember to consider Fatigue effects, if the situation calls for it.

POSSIBLE VEHICLE MANEUVERS: CHASES

Evasive Maneuvers: To make it as difficult as possible to hit their vehicle, the pilot may attempt Evasive Maneuvers on their action. Throw Vehicle Skill/DEX 8+ to gain the pilot's Vehicle skill as a negative DM to attacks made until their next turn.

Better Position: While it is not normally possible to re-roll the Position throw in a round, it is possible to perform maneuvers to help ensure that your vehicle might be in a better Position next turn. For their action, the pilot of a vehicle may roll Vehicle Skill/DEX 8+ to gain a +1 bonus to next round's Position throw. Note that it is possible for one vehicle to aid another allied vehicle to gain a better Position on an enemy vehicle (see Collaboration in the Basic Rules chapter).

Obstacle Course: This risky maneuver is a good choice for agile vehicles desperate to get away from more heavily armed pursuers. The driver/pilot chooses an Obstacle Number, and then throws Vehicle Skill/DEX vs the Obstacle Number chosen (include the vehicle's Agility score). If the throw fails, the vehicle crashes and is Knocked Out (see Vehicle Penetration and Damage, below) and everyone on board takes 3D damage. If the throw is successful, then the vehicle performing the maneuver can leave the chase, unless the pursuing vehicles opt to throw Vehicle Skill/DEX against the same Obstacle Number the first vehicle chose. If they fail, they crash and are Knocked Out. If they succeed, they continue the chase. If they do not opt to throw the Obstacle Number test, then they are out of the chase.

Ramming: For reasons we will not explore here, deliberately ramming another vehicle is a staple of gaming. In tactical combat, performing a ram requires one action by the vehicle pilot. The pilot must throw Vehicle Skill/DEX 8+ to hit a stationary target in combat. If the target is moving, the throw is an opposed Vehicle/Skill/DEX. In both cases, add the Agility scores of the vehicles involved. Ramming a stationary vehicle outside of combat is automatically successful. However, if the ram is intended as a first strike, roll to determine Surprise, as normal. Characters who are not surprised may dive for cover to avoid taking damage. Vehicle crews that are not surprised may attempt to evade, making the ramming attack an opposed Vehicle Skill/DEX throw.

In a chase, performing a ram requires that the ramming vehicle have superior Position on the target. Rams cannot occur between two vehicles with the same Position. Ramming a target is an opposed Vehicle/DEX throw, where the vehicle with superior Position gains Advantage on the throw. Apply Agility and Position DMs to the throws. Chases assume that both vehicles are moving.

In both tactical and chase combat, see the collision damage rules below.

COLLISIONS

Characters hit by vehicles traveling at high speeds take 6D damage, subtracting armor. Referees may want to adjust damage to reflect extremely large (8D+) or very small vehicles (4D).

Vehicles that suffer uncontrolled high-speed collisions or crashes are Destroyed, as per the Critical Damage table.

If a character is attempting to control a crash, Referees can assume that the vehicle will be Knocked Out, and that characters inside suffer damage accordingly.

Vehicles performing a ram on a target should use the following table to determine damage. If a ramming vehicle is significantly larger than the target vehicle, is traveling at significantly higher relative speeds, or is specifically fitted with a ram, treat the ramming vehicle as having one level higher armor than listed, and read off the next lower row.

ATTACKING VEHICLES

When using a vehicle-mounted heavy weapon in tactical combat—not a chase—throw Heavy Weapons/DEX 8+ to hit a target in Effective range and 10+ to hit a target beyond it and up to its maximum range. Apply normal ranged combat modifiers to this roll. The Referee might rule that some heavy weapons ignore otherwise good cover (DM-2). Treat as target obscured (DM-1).

Throw Gunnery/DEX 8+ to hit a target with vehicle-mounted gunnery weapons at the Gunnery Weapon's Effective range in tactical combat. Beyond Effective range, this throw becomes Gunnery/DEX 10+. Gunnery Weapons have very long ranges and for typical tactical engagements, Gunnery weapon targets will almost always be within Effective range. Hitting a human-sized target with a Gunnery weapon is penalized at DM-2.

VEHICLE MODIFIERS TABLE

TACTICAL COMBAT CONDITION	DM
Beyond Effective Range	DM-2
Attacking human sized target with Gunnery weapon	DM-2
Attacking from moving vehicle – unstable firing platform (applies to Chase combat as well)	DM-2
Attacking from moving vehicle, TL7+ (military vehicles)	DM+0
Attacking stationary vehicle	DM+1
Attacking fast moving ground target	DM-2
Attacking slow-moving aerial target	DM-2
Attacking fast-moving aerial target from the ground without specialized anti-aircraft equipment	Not Possible
Aiming for a specific location on a target vehicle	DM-4

Small arms and heavy weapon attacks on a stationary vehicle enjoy DM+1 due to the target's size. Small arms and heavy weapon attacks on fast moving ground vehicle targets, or slow-moving aircraft, helicopters, or grav vehicles are penalized by DM-2. Note that in many cases, attacks on aircraft are made beyond Effective range, meaning that the base difficulty for most personal attacks against slow-moving aircraft will be 12+.

Small arms and ground-fired Heavy weapons cannot hit fast-moving or high-altitude aircraft. There are a number of specialized anti-aircraft weapons available in the Equipment chapter.

Personal weapon attacks from a fast-moving vehicle, like a gunman firing a pistol out of the window of a moving car, are penalized by DM-2. This penalty is cumulative with attacking a fast-moving target, such as shooting your submachinegun from one moving vehicle at another moving vehicle. Note that this penalty applies in the Chase combat rules for vehicles as well.

At TL7+, Heavy and Gunnery weapons mounted on military vehicles use targeting computers and stabilization, and do not suffer the DM-2 for attacking

COLLISION DAMAGE MATRIX

	TARGET VEHICLE:		
RAMMING VEHICLE:	Unarmored	Light Armor	Heavy Armor
Unarmored	Surface	None	None
Light Armor	Internal	Internal	Surface
Heavy Armor	Critical	Critical	Internal
Heavy Armor w/Ram	Destroyed	Destroyed	Critical

from a fast-moving vehicle. Nor do such vehicles suffer penalties when firing at moving vehicles—in such a situation, the Referee should probably be using the Chase rules, where Position accounts for relative speed penalties.

A gunner may aim for a specific location on a target vehicle. Penalize the attack by DM-4. If the attack is successful and penetrates doing at least Internal Damage, it damages the called location. Otherwise, the shot misses completely.

Vehicle Penetration and Damage

When an attack hits a vehicle, refer to the Vehicle Penetration Matrix Table below and roll on the damage tables as indicated by that matrix. If an attack hits with an Effect of 6 or more, shift one column to the left to determine the damage. Note that if a given weapon does not have any AV hits listed in its description, it has 1 AV hit roll.

Surface Damage Table Results

Bounce Off: The attack has bounced off the vehicle's skin or armor. No damage.

Device: One secondary external device, such as externally mounted cargo, a headlight, or antenna, is destroyed (Referee's discretion).

Locomotion: The vehicle's means of locomotion or engine is damaged.

First Hit: halve the vehicle's speed.

Second Hit: The vehicle's locomotion is disabled, and it cannot move. In case of aircraft or high-flying grav vehicles, this might cause a crash; throw Aircraft/DEX 8+ or Grav Vehicle/DEX 8+ respectively to land safely. Otherwise, the aircraft crashes: roll on the Critical Damage table

Breach: If the vehicle is pressurized, its environmental seal is breached, exposing its occupants to the environment. Patching an environmental seal breach requires pre-packaged emergency hull patches. Most sealed vehicles carry 1D hull patches, which may be used within one combat round of sustaining the damage; alternatively, sealing the breach requires Repair/INT 6+ throw and 1D minutes.

Note that a breached watercraft begins to leak. This reduces its speed by one quarter and reduces vehicle Agility by -1. Four breaches will cause the watercraft to take in too much water and sink. This only applies to small watercraft; large ships such as steamships and larger vessels stay afloat despite such minor breaches—they have compartmentalized hulls designed to prevent small breaches from sinking the whole ship. Only a Knocked Out critical result (see below) will sink large craft.

Weapon: One of the vehicle's weapons is disabled and may not fire. Determine which weapon randomly. Throw Repair/INT 8+ or Gunnery/INT 10+ to repair a disabled weapon. Subsequent hits against the same disabled weapon will damage the weapon to the point where it cannot be repaired in combat. If the vehicle survives the encounter, roll 1D: 1-3; the weapon is repairable, 4-6; the weapon is destroyed and must be replaced.

CRITICAL DAMAGE

2D	CRITICAL DAMAGE
6 or less	Knocked Out
7-9	Crew Hit
10 or more	Destroyed

PENETRATION MATRIX TABLE

	UNARMORED	LIGHT ARMOR	HEAVY ARMOR
Small Arms	Surface	None	None
Heavy weapon	Critical	Internal	Surface
Gunnery Weapons	Destroyed	Critical	Internal

SURFACE DAMAGE TABLE

2D	DAMAGE
5-	Bounce Off
6-7	Device
8-9	Locomotion
10	Breach
11	Weapon
12+	Internal Damage

INTERNAL DAMAGE TABLE

2D	INTERNAL DAMAGE
4-	Breach
5	Cargo
6	Occupants
7	Weapon
8-9	Locomotion
10	Electronics
11	Power Plant
12	Critical

Internal Damage: The vehicle suffers an unlucky penetrating hit! Roll on the Internal Damage table!

INTERNAL DAMAGE

Breach: If the vehicle is pressurized, its environmental seal is breached, exposing its occupants to the environment. Patching an environmental seal breach requires pre-packaged emergency hull patches. Most sealed vehicles carry 1D hull patches, which may be used within one combat round of sustaining the damage; alternatively, sealing the breach requires Repair/INT 6+ throw and 1D minutes.

Note that a breached watercraft begins to leak. This reduces its speed by one quarter and reduces vehicle Agility by -1. Four breaches will cause the watercraft to take in too much water and sink. This only applies to small watercraft; large ships such as steamships and larger vessels stay afloat despite such minor breaches—they have compartmentalized hulls designed to prevent small breaches from sinking the whole ship. Only a Knocked Out critical result (see below) will sink large craft.

Cargo: 1 ton of randomly determined cargo is destroyed. If no cargo remains, treat this as an Occupants result.

Occupants: 1D hits injure random vehicle occupants: crew or passengers. Each hit inflicts 3D damage. If there are fewer occupants than the rolled number of hits, distribute the hits randomly between the remaining occupants, which means that an occupant may suffer a double hit. Subtract personal armor from this damage if applicable. If the pilot suffers a hit and falls unconscious, a flying or fast-moving vehicle will crash (roll a Critical Hit) unless another character with the appropriate skill can grab the controls within one combat round; alternatively, in vehicles with an autopilot, it can take over; however, autopilots always lose Position chase throws.

Weapon: One of the vehicle's weapons is disabled and may not fire. Determine which weapon randomly. Throw Repair/INT 8+ or Gunnery/INT 10+ to repair a disabled weapon. Subsequent hits against the same disabled weapon will damage the weapon to the point where it cannot be repaired in combat. If the vehicle survives the encounter, roll 1D: 1-3; the weapon is repairable, 4-6; the weapon is destroyed and must be replaced.

Locomotion: The vehicle's locomotion or engine is damaged.

First Hit: halve the vehicle's speed.

Second Hit: The vehicle's locomotion is disabled, and it cannot move. In case of aircraft or high-flying grav vehicles, this might cause a crash; throw Aircraft/DEX 8+ or Grav Vehicle/DEX 8+ respectively to land safely. Otherwise, the aircraft crashes: roll on the Critical Damage table

Electronics: One of the vehicle's electronic systems is destroyed: usually the computer systems or major sensors/radar. Flying an aircraft or Grav vehicle with damaged electronics incurs a DM-2 penalty to all vehicle throws.

Power Plant: The vehicle's power plant takes a direct hit.

First Hit: the power plant is damaged; halve the vehicle's speed (cumulative with Locomotion damage). The vehicle cannot fire energy weapons and move in the same round.

Second Hit: the power plant is destroyed; the vehicle is immobilized and cannot use electronics or energy weapons. Aircraft or grav vehicles may crash: throw Aircraft/DEX 8+ or Grav Vehicle/DEX 8+ to land safely, otherwise roll on the Critical Damage table.

Critical: The vehicle suffers massive internal damage. Roll on the Critical Damage table below.

CRITICAL DAMAGE

Knocked Out: The vehicle is seriously damaged and inoperable until it undergoes major repairs at a full-scale workshop. Each occupant must throw END 6+ to avoid taking 3D damage. Aircraft and grav vehicles at high altitudes crash, causing 6D damage to all occupants. Low-flying vehicles crash, causing 3D damage to all occupants. Subtract personal armor from this damage if applicable. Watercraft, including large vessels, suffer a massive hull breach. They will sink within 1D combat rounds.

Crew Hit: All crew and passengers suffer 4D damage each. Personal armor reduces this damage accordingly.

Destroyed: The vehicle is destroyed with the loss of all hands. In the case of ground vehicles, occupants may throw DEX 8+ to bail out unscathed; failure causes 5D damage.

REPAIRS

Throw Repair/INT 8+ to jury-rig a damaged or disabled system back to functional status with a handful of spare parts. These repairs are temporary. The system will stop functioning again after 1D hours. Breaches are easier to repair, as noted above.

Properly repairing a disabled system costs 2Dx10% of the system's original cost. Throw Repair/INT or Repair/EDU 10+ to repair the system in the field using spare parts. If this throw is unsuccessful, the damage requires a workshop to repair. Unless the Referee decrees that the vehicle itself is damaged beyond repair, a character with at least the Repair 1 skill will be able to replace or repair the system, at this cost, at a properly equipped workshop.

Ground Force Weaponry Against Starship-Scale Targets

All spacecraft are immune to Small Arm fire. Heavy weapons that hit an unarmored space craft of 99 tons or less will cause one ship surface hit. Roll for damage location normally, per the Space Combat chapter. Gunnery weapons are significantly more dangerous. They can harm small craft of 99 or smaller tons: Gunnery weapons inflict one Internal hit on a successful attack against small craft. Against ships between the 100-999-ton range, Gunnery weapons inflict one Surface hit. Spacecraft of 1000 or more tons are immune to non-specialized ground weapons.

Starship-Scale Weaponry Against Vehicle Targets

Civilian ship lasers are considered Gunnery Weapons vs. vehicles. Civilian ship missiles are considered Heavy weapons but cause 1D AV hits when penetrating vehicle armor. Any heavier starship weapons will destroy any vehicle on a successful hit. Any starship weapons will utterly vaporize human-sized targets.

Vehicle Combat Example 1: Grav Vehicle Chase!

Markus Baldhoff is a ship's comms officer who managed to get away from a deal gone bad on the hive-city world of Agrona. He managed to drag his wounded, unconscious compatriot outside. Then he commandeered the closest available speeder, lugged his friend over the passenger seat, strapped him in, and then started the ignition. It wasn't long before he was zipping through traffic, winding his way through structures, and evading the three police grav cars that picked up the chase from the scene of the crime.

The Referee declares a five-round chase. If Markus can evade capture or destruction for five rounds, he'll get away from the fuzz. If not…

Round 1:

Everyone involved rolls Position:

Note that in this case the Referee is rolling for each participant, but it is possible to roll for each side, in the case where there are many vehicles. However, it might be advisable to have tokens or even miniatures placed on a "ladder" to help track Position.

Police-01: 1D + 1 (Agility) + 1 (Grav Vehicles) = 2 + 2 = 4
Police-02: 1D + 1 (Agility) + 1 (Grav Vehicles) = 5 + 2 = 7
Police-03: 1D + 1 (Agility) + 1 (Grav Vehicles) = 4 + 2 = 6
Markus: 1D + 3 (Agility) + 1 (Grav Vehicles) + 1 (DEX DM) = 1 + 5 = 6

Police-02 has 1 point of Position over Markus. The police broadcast "slow your vehicle down immediately, or we will open fire!" Since this is just a courtesy warning on this dystopian planet, they open fire, rolling 7 + 1 (Heavy Weapons) – 1 (Position DM) = 7. The short burst from the machinegun barely misses, and Markus feels bile rising in his throat.

Police-03 has a 0-point Effect on Markus and decides not to fire. Instead, they will try to assist Police-02, rolling Opposed Grav Vehicles against Markus. If they succeed, they will provide Police-02 with a DM+1 bonus to the next round's Position roll. They roll 2 + 1 (Grav Vehicles) + 1 (Agility) – 2 (Position DM) = 2, and Markus rolls 3 + 1 (Grav Vehicles) + 1 (DEX DM) + 3 (Agility) – 2 (Position DM) = 6, easily keeping Police-03 from forcing him into a bad situation.

Markus decides to perform evasive maneuvers to avoid being shot to pieces! He rolls Grav Vehicles/DEX 10+: 8 + 3 (Agility) + 1 (Grav Vehicles) + 1 (DEX DM) = 13. This gives his pursuers a penalty equal to his Grav Vehicle skill to hit him for the next turn (DM-1).

Round 2:

Everyone Rolls Position

Police-01: 1D + 1 (Agility) + 1 (Grav Vehicles) = 1 + 2 = 3
Police-02: 1D + 1 (Agility) + 1 (Grav Vehicles) = 3 + 2 = 5
Police-03: 1D + 1 (Agility) + 1 (Grav Vehicles) = 5 + 2 = 7
Markus: 1D + 3 (Agility) + 1 (Grav Vehicles) + 1 (DEX DM) = 5 + 5 = 10

Markus guns the engine, and speeds through the horrible arcobloc canyons of Agrona close to the buildings. He loses the fuzz, at least momentarily, and starts fiddling with the speeder bike's tracking signal. If he can disable it, he will easily lose the cops. The Referee rules that this is possible, with Computers/INT 10+, but Markus incurs a DM-2 penalty for also having to fly the speeder. He rolls: 7 + 1 (INT DM) + 3 (Computers) – 2 (you shouldn't hack and fly!) = 9, which just fails. The Referee secretly notes that if Markus attempts this again, he'll have to roll to avoid obstacles as he's flying while distracted.

Round 3:

Everyone Rolls Position

Police-01: 1D + 1 (Agility) + 1 (Grav Vehicles) = 2 + 2 = 4
Police-02: 1D + 1 (Agility) + 1 (Grav Vehicles) = 6 + 2 = 8
Police-03: 1D + 1 (Agility) + 1 (Grav Vehicles) = 3 + 2 = 5
Markus: 1D + 3 (Agility) + 1 (Grav Vehicles) + 1 (DEX DM) = 3 + 5 = 8

Markus got caught up in his hacking attempt and didn't see Police-02 approaching until the last moment. He turns hard and avoids being at a major disadvantage. The Referee rolls for Police-02 to hit with a full auto burst of machinegun fire! That's four attacks! The police on Agrona are not known for their kinder, gentler, approach. First burst: 4 + 1 (Heavy

Weapons) – 2 (Position DM) = 3; second burst: 5 + 1 (Heavy Weapons) – 2 (Position DM) = 4; third burst: 4 + 1 (Heavy Weapons) – 2 (Position DM) = 3; fourth burst 10 + 1 (Heavy Weapons) – 2 (Position DM) = 9, a hit!

The Referee consults the Vehicle Penetration Matrix Table. The GP Machinegun is a Heavy Weapon, and the Speeder is unarmored, which means that the speeder takes a Critical Hit! This is bad, bad news. Since the Referee is not using the Hero Points optional rule, there is no way for Markus' player to influence the outcome of what's about to happen. He Rolls a 9 on the Critical Damage table, which means a Crew Hit! Markus suffers 17 points of damage, mitigated by armor to 9 points. He is very glad to have purchased some surplus synthsilk armor at the last starport. Markus has a Minor Wound, which penalizes all his rolls by DM-1. His unconscious friend suffers 11 points of damage, reduced by armor to 3. The Referee notes the damage but will determine what happens to the wounded friend afterwards. The chase is still on!

Markus will perform evasive maneuvers: he rolls Grav Vehicles/DEX 10+: 6 + 3 (Agility) + 1 (Grav Vehicles) + 1 (DEX DM) – 1 (Minor Wound) = 10, which is enough to penalize attacks against his ailing speeder by DM-1!

Round 4:

Everyone Rolls Position

Police-01: 1D + 1 (Agility) + 1 (Grav Vehicles) = 2 + 2 = 4

Police-02: 1D + 1 (Agility) + 1 (Grav Vehicles) = 3 + 2 = 5

Police-03: 1D + 1 (Agility) + 1 (Grav Vehicles) = 3 + 2 = 5

VEHICLE COMBAT EXAMPLE: GRAV VEHICLE CHASE!

The Pursued Party: A player character in the wrong place at the wrong time.

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Markus Baldhoff	6	9	6	12	9	6	12	6

Relevant Skills: Computers 3, Grav Vehicles 1
Relevant Traits: None
Equipment: Stolen Grav Speeder, Synthsilk armor (8)

Speeder **Skill: Grav Vehicle**

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
10	900	+3	2000	Practically unlimited
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Unarmored	1/1	4	None	
Features: Autopilot; orbital-range comms; sealed and pressurized.				

The Chasing Party: The local constabulary in three separate grav cars.

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Police	8	7	7	8	7	7	14	7

Relevant Skills: Computers 1, Grav Vehicles 1, Heavy Weapons 1
Relevant Traits: None
Equipment: Cloth Armor (6), pistols, stunners, etc.

Aircar x 3 **Skill: Grav Vehicle**

Tech Level	Cost (KCr)	Agility	Speed (km/h)	Range (km)
10	150	+1	120	Practically unlimited
Armor	Crew/Passengers	Cargo (tons)	Weapons	
Light	1/4	0.2	GP Machinegun (3D) Auto 4	
Features: Autopilot; long-range comms.				

Markus: 1D + 3 (Agility) + 1 (Grav Vehicles) + 1 (DEX DM) – 1 (Wound) = 2 + 4 = 6

Markus manages to keep ahead of his pursuers, wincing through the pain. Markus' player wonders if he could perform some sort of maneuver to give Markus a bonus to the next (and final) round's Position score. The Referee agrees and asks for a Grav Vehicles/DEX 12+ roll. The player describes diving hard into the tight alleys of the hab blocs, skimming low over roads and promenades. The Referee gives a DM+1 bonus to the roll for the evocative description of this very risky maneuver. The roll is 4 + 3 (Agility) + 1 (DEX DM) – 1 (Wound) + 1 (Bonus) = 8, which is not enough to make the roll, but at least isn't so low as to cause further problems.

Round 5:

Everyone Rolls Position

Police-01: 1D + 1 (Agility) + 1 (Grav Vehicles) = 4 + 2 = 6

Police-02: 1D + 1 (Agility) + 1 (Grav Vehicles) = 6 + 2 = 8

Police-03: 1D + 1 (Agility) + 1 (Grav Vehicles) = 5 + 2 = 7

Markus: 1D + 3 (Agility) + 1 (Grav Vehicles) + 1 (DEX DM) – 1 (Wound) = 4 + 4 = 8

Police-02 is clearly out for blood, and fires another full auto burst, collateral damage be damned! First burst: 7 + 1 (Heavy Weapons) – 2 (Position DM) = 6; second burst: 6 + 1 (Heavy Weapons) – 2 (Position DM) = 5; third burst: 11 + 1 (Heavy Weapons) – 2 (Position DM) = 10, a hit! fourth burst 5 + 1 (Heavy Weapons) – 2 (Position DM) = 4.

Markus and his companion are in deep trouble, as the Referee rolls on the Critical Hit table. A Knocked Out result! However, Markus' player reminds the Referee that the previous round's maneuver took the speeder low to the ground. The Referee, feeling munificent and merciful, agrees that both characters only take 3D damage. Markus tucks and rolls, and takes a paltry 6 points of damage, reduced to zero from armor. He'll be fine! His unconscious companion is not so fortunate, and takes 15 points, reduced to 7 from armor. The Referee figures that if Markus' friend wasn't seriously injured before, they are now. After receiving this bit of information, the player sighs and yearns for the days when NPC allies were disposable.

Markus raises his hands in the air as the three police grav cars circle the hapless comms officer…

PSIONICS

Many science fiction genres posit that in the future, humanity may unlock the powers of the mind, allowing humans to reliably produce tangible psychic effects. Note that in Cepheus Deluxe, psionics are rare and potentially very powerful. Their use in a campaign is subject to the Referee's discretion.

PSIONIC TRAINING

The Referee may decide to allow one or more psionic characters. In that case, roll 2D to determine the character's Psionic Strength (PSI) characteristic. The character may gain one of the following psionic talents. They may also attempt to gain further psionic talents. For each additional psionic talent, throw PSI 8+ to receive that talent. Apply a DM-1 per talent the character already has. The five psionic talents are:

- Awareness – powers that allow the psion's mind to control their own body.
- Clairvoyance – these powers permit perception at a distance.
- Telekinesis – the psion is able to control the movement of matter with their mind.
- Telepathy – this talent covers reading minds and mental communication.
- Teleportation – the psion can move from one point to another instantly in open defiance of the laws of physics.

NOTE: If a Psion fails to gain any psionic powers, they still gain Telepathy.

OPTIONAL RULE: POWERFUL PSIONS

For a more predictable distribution of Psionic Strength, the Referee may permit psionic characters to roll 1D+6 for their PSI rather than 2D, or to roll with Advantage. This will ensure that all psionic characters are reasonably competent but will also somewhat increase their power level.

USING A PSIONIC TALENT

To activate a psionic talent, the psion must spend the listed number of PSI points, which are taken directly from the PSI characteristic. If this activation cost reduces their PSI below zero, then apply the excess points to the psion's Stamina, and then Lifeblood scores, as damage. A character with no PSI points remaining cannot activate a talent. Using a psionic talent in combat counts as an action. Each Talent's various abilities note the minimum PSI characteristic required for its use. This is also the cost in PSI points to use the ability. It also notes the ability's range. Characters regain their full PSI points after an 8-hour rest.

AWARENESS

Awareness allows the psion greater control over their own body.

Enhanced Characteristic (PSI 1+, Personal): the character may transfer PSI points to their STR, END, or DEX as desired. This ability costs 1 PSI point per characteristic point added and lasts for 10 minutes. Multiple simultaneous uses of this ability are permitted, as long as the psion has sufficient PSI to spend. Characteristic increases will change that Characteristic's DM, accordingly.

Suspended Animation (PSI 3, Personal): the character enters a meditative state for 7 continuous days without requiring food, water, or a breathable atmosphere; the character is immune to vacuum for this power's duration. The psion may terminate this power at will during this period.

Magnify Senses (PSI 4, Personal): choose one sense; the psion magnifies it to a superhuman level for 10 minutes. Magnifying sight removes the penalty for firing a weapon beyond its effective range, as well as any penalties for darkness or poor lighting. Magnifying hearing grants DM+2 to Surprise throws. Magnifying smell grants the character with the olfactory senses of a bloodhound. Magnifying taste permits the character to detect toxins in minute samples of substance. Magnifying touch permits detecting microscopic features in the touched surface, such as microscopic cracks.

Awakening (PSI 5, Personal): the psion can awaken any single unconscious character. While this power does not heal any damage, it can awaken unconscious wounded characters, and safely thaw cryogenically frozen persons (without requiring a low tech cryotube's survival throw). The awakening process takes one round.

Alter Self (PSI 6, Personal): the psion can change their appearance, including their fingerprints and other biometric markers, as desired, within the limits of their species or similar subspecies (including choosing a different gender). If the psion studies a target for 10 minutes (even covertly), they can imitate this target and its biometric markers. The disguise lasts for 8 hours.

Regeneration (PSI 9 but see below for cost; Personal): the psion can heal their own Lifeblood points lost from combat damage. This requires 2 PSI points per Lifeblood point healed but requires a minimum of PSI 9 to use. The effects of the healing take one combat

round: a character who uses Regeneration in one round will not feel the effects until the start of the next round.

Drain Health (PSI 10 but see below for cost; Personal): drain 1 Lifeblood from a target, per PSI point spent, healing the psion at the same rate, up to their full Lifeblood rating. If the psion is uninjured, the target still takes damage. Note that touching an unwilling target requires an attack throw, using the psion's Melee Combat skill and Psi DM.

Empathic Healing (PSI 12 but see below for cost; Personal): this ability allows the psion to heal others. For every two PSI points spent, the psion can heal a target for one point of Lifeblood. The psion suffers 1D damage every time they use this power. Targets cannot regain more points than their maximum Lifeblood.

CLAIRVOYANCE

Clairvoyance abilities allow the psion to sense events at distant locations even beyond their view. Clairvoyance cannot usually be blocked.

Sense (PSI 1, 50m): the character learns the rudimentary goings-on at a nearby location when using this ability. This provides the psion with a basic understanding of who and what is in a location, and generally what they seem to be doing, rather than any great details.

Clairvoyance/Clairaudience (PSI 5, 500km): this ability allows the character to view (clairvoyance) or to hear (clairaudience) a specific location up to 500km away. The character perceives the location as if they were actually there.

Danger Sense (PSI 6, 30m radius): a precognitive power, danger sense grants the psion with this ability to sense potential threats. For 8 hours per use of this power, the Referee will inform the character about any serious active threat to their lives, such as an ambush or surprise attack. This grants DM+2 to Surprise rolls as well.

Clairsentience (PSI 7, 500km): the psion can use this ability to use all senses to perceive a location up to 500km away. The character perceives the location as if they were actually there.

TELEKINESIS

Telekinesis allows the psion to manipulate objects without physically touching them.

Lift 1 gram (PSI 1, 50m): lift and maneuver up to a 1gm object for 1 minute (10 combat rounds). This power does not confer fine motor control to the telekinetic but is useful for moving small objects very subtly.

Lift 1kg (PSI 2, 50m): lift and maneuver up to a 1kg object for 1D combat rounds. The object can cause 1D damage if it is hurled at a target. To hit a target, throw PSI 6+ and use the psion's full PSI characteristic to determine the Attribute modifier. The normal ranged combat modifiers also apply. For example, a psion with PSI 10 would gain a DM+1 to hit with a thrown object.

Lift 100kg (PSI 5, 50m): lift and maneuver up to a 100kg object for 1D combat rounds. This will cause 3D damage if hurled at a target. To hit a target, throw PSI 6+ using the psion's full PSI characteristic to determine the Attribute modifier. Normal ranged combat modifiers also apply. Psions can also lift themselves or one other person if they are 100kg or lighter. This rudimentary flying can move a character at 5m per round, for one minute.

Choke (PSI 8, 10m): grab a single humanoid by its throat, or equivalent, at a distance, and suffocate them for 1D damage per round, for a maximum number of rounds equal to the psion's full PSI score. The target may throw STR 10+ to break this chokehold; one attempt is permitted per combat round.

Dissipate Energy (PSI 9, Personal): throw 5D. This is the number of damage points, from any source, that the power absorbs without harming the character. Once these points are expended, the power ends.

Microkinesis (PSI 10 but see below for cost, Personal): This ability allows the psion to manipulate microscopic objects. Microkinesis may be used for subtle, but highly effective attacks on internal organs, causing 1D damage per 2 PSI points spent. Alternatively, this power may aid Medicine (any Surgery or First Aid, but not Diagnosis), Engineering, or Repair rolls by DM+1 per 3 PSI points invested.

Zombie (PSI 11, 500m): this macabre power allows remote control of a relatively intact corpse as a puppet. The power lasts as long as the psion concentrates. The zombie can perform melee attacks in place of the psion's actions. Corpses cannot be so finely controlled as to allow ranged attacks.

TELEPATHY

Telepathy is the terrifying talent of establishing mind-to-mind contact. It is usually subtle but can also be used to bluntly crush the wills of those who oppose the telepath.

Note that thoughts are universal, and thus psionic communications ignore language barriers. However, telepaths find it difficult to perform mental scans on, or communicate with species that are significantly different from themselves—such as an insectoid alien being mind-probed by a human telepath. Such psionic attempts incur double PSI costs.

Life Detection (PSI 1, 20m): the telepath can detect the presence of other minds, their general type (human, alien, animal, etc.), and their general location.

Telempathy (PSI 2, 20m): the telepath can read and communicate basic emotions; they may also attempt to influence the behavior of sentient beings and aliens, subject to Referee discretion.

Read Surface Thoughts (PSI 3, 20m): the telepath can read another sentient being's active, current thoughts. A non-Psionic target cannot notice this power being used on them, but a Telepathic Shield (see below) blocks the attempt.

Invisibility (PSI 4, see below for range): this ability causes living creatures (but not machines) to ignore the telepath. The psion becomes essentially invisible to all organic creatures within 10m range. It lasts while the psion concentrates on being invisible, which is a free action each round. Attacking any target terminates this power.

Communicate (PSI 5, 5km): the telepath communicates telepathically with one individual. The target does not have to be a telepath to receive and send thoughts in reply, but the telepath has to initiate the contact.

Emotion (PSI 6, 50m): this power forces one target to feel a powerful emotion (such as fear) for 1D combat rounds.

Suggestion (PSI 7, 5km): the telepath can plant a simple hypnotic suggestion in the target. Note that targets will not obey suggestions that may physically harm themselves. Furthermore, if the suggestion would cause the target to harm a friend, they may throw INT 6+ to resist the effect.

Memory Block (PSI 8, Personal): this insidious ability causes one target to forget up to 12 hours of their recent memory. A Probe (see below) circumvents the Block.

Probe (PSI 9, 1m): Telepaths can use this ability to read deeply into the thoughts and long-term memories of a target. The Probe allows the character to know everything the target knows about one specific topic before terminating.

Assault (PSI 10, 250m): a brute-force telepathic assault, causing 4D damage to the target. Apply damage first to the target's PSI, then their Stamina, and finally their Lifeblood. If all three characteristics are reduced to zero, the target dies from a brain hemorrhage. Damage from a telepathic assault regenerates as per the regular healing rules.

Domination (PSI 12, 5km): the telepath can mind-control one target for 2D combat rounds. The control is so complete that it may include forcing the target into harming their friends. If the telepath commands the dominated target to harm themselves, they may throw INT 8+ to shake off the mind control.

Shields and Telepathic Combat: all telepaths can shield themselves and allies in a 3m radius from telepathic intrusion. Attempting to use a telepathic ability against a shielded target requires an opposed PSI throw. Telepathic defenders shielding their allies throw for non-psionic allies. The defender wins on a tie. If the intruder wins, they may use their ability as desired at the usual cost, and the defender loses one point of Psionic Strength. If the intruder loses, they fail to penetrate the shield and expend one point of Psionic Strength. Note that this uses both characters' current PSI DMs: an exhausted telepath is much more vulnerable to mental intrusion.

TELEPORTATION

Teleportation allows instant travel between locations. The psion may only teleport their body, clothes, and personal equipment. Characters cannot teleport more than one kilometer in altitude in a gravity well: teleportation still obeys the law of conservation of mass and energy and the difference in potential energy from any change in altitude must correspond to a change in body temperature in the teleporter. A change in altitude of more than one kilometer would heat or cool the teleporter's body to a lethal degree. A single teleportation requires an action to perform.

Blink (1 PSI, 5m): allows for short teleports of 5m in any direction, while carrying up to a light encumbrance load.

Teleport Self (PSI 7, 5000km): the psion can teleport up to 5000km with light encumbrance load.

Heavy Teleport (PSI 11, 500km): like Teleport Self, but this ability allows the teleporter to carry up to a heavy encumbrance load, including carrying another living being.

PSIONIC EQUIPMENT

The following psionic equipment is available in settings using psionics.

PSIONIC EQUIPMENT TABLE

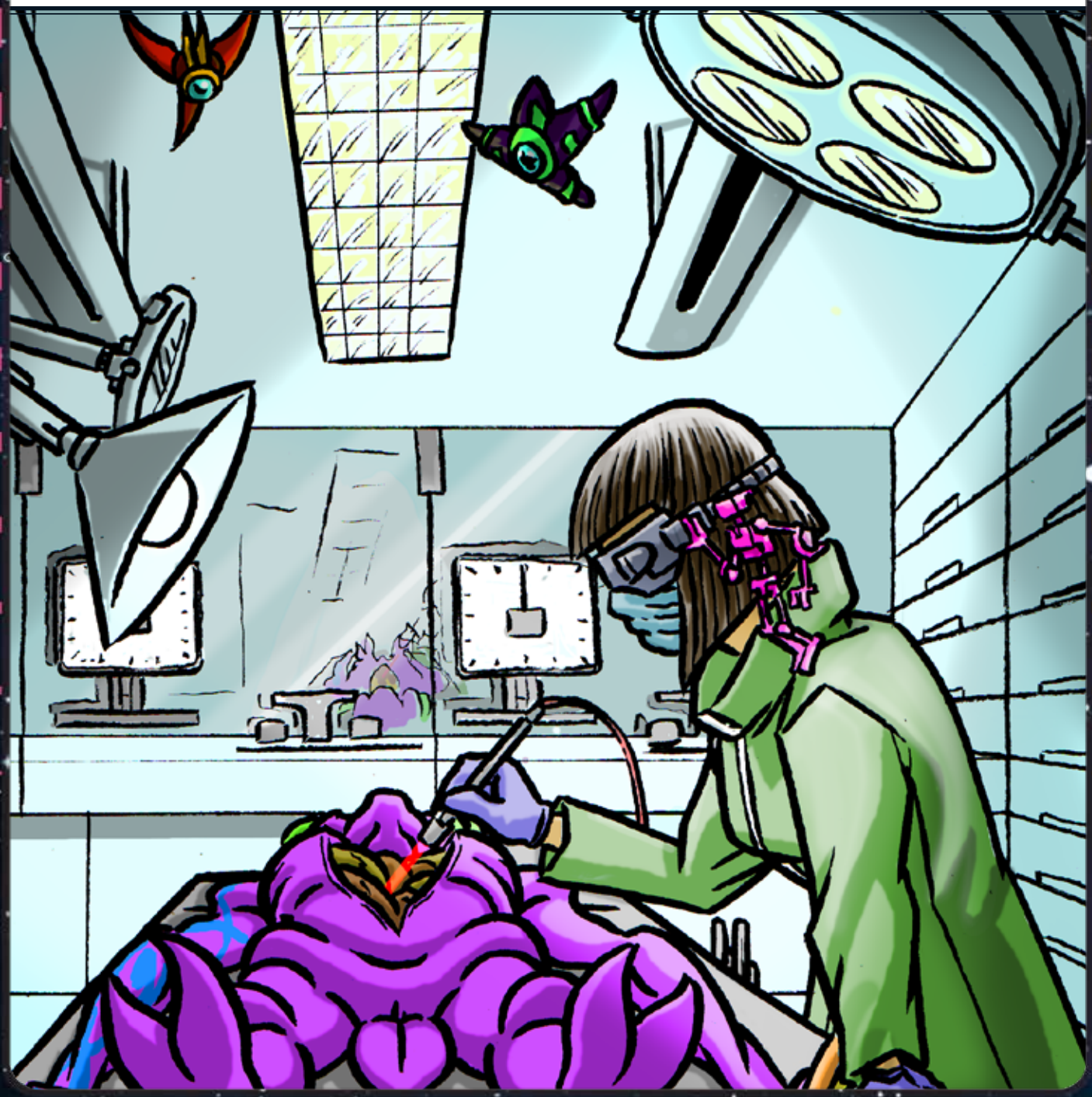
ITEM	TECH LEVEL	COST
Psionic Booster	9	Cr500
Psionic Inhibitor	9	Cr4000
Psionic Shield Helmet	8	Cr8000
Psionic Shield	13	MCr1

Psionic Booster: this esoteric drug restores up to 6 points of PSI. If ingested while the psion is at full PSI, it temporarily increases PSI by 4. Whenever taking more than one dose per week, throw END 6+ or suffer 3D damage and permanently lose one point of PSI.

Psionic Inhibitor: this drug forces the subject to make a PSI 9+ throw to use any psionic power and prevents PSI regeneration. This drug lasts for 4D hours, but the character can throw END 6+ each hour after the first four hours to shrug off its influence.

The Psionic Shield Helmet: fully protects its wearer from telepathic intrusion. However, a character wearing this helmet cannot use psionics themselves. This helmet does not protect its wearer from the effects of other psionic powers, such as telekinetic attacks.

Psionic Shield: as a psionic shield helmet, but cybernetically implanted and invisible to the casual observer.



STARSHIP OPERATIONS

The stars await! Adventurers ply the star-lanes and boldly venture into the unknown; others may serve in a navy, hunting pirates, or raiding enemy shipping. Still others may mine asteroid belts for valuable ores, smuggle goods to distant planets, or even engage in piracy. This chapter covers interplanetary and interstellar travel, as well as starship operations and procedures.

INTERPLANETARY TRAVEL

Starships and other spacecraft in Cepheus Deluxe use reactionless real-space thrusters with an acceleration rating from 1G to 6Gs. Ships normally travel under acceleration halfway to their destination, then decelerate for the other half of the journey. For simplicity's sake, Cepheus Deluxe abstracts interplanetary travel (and travel times) into two broad categories: travel between distant regions within the system, and travel within a given region.

A region in space is a well-defined area in a solar system. The most common region is a planetary system: a world, its satellites, and its 100-diameter Jump distance. Other regions in a system could include a lonely mining station and the surrounding asteroids, the system's main star, a distant planetoid, or a red dwarf binary.

Travel within a region takes between 2D to 4D hours, divided by the ship's thrust rating. For example, leaving an Earth-sized planet and heading to the Jump distance in a 2G-Thrust ship would usually take 2D hours–an average roll of 7 hours–divided by 2, for 3.5 hours. Referees should consult the Common Interplanetary Travel Times by Acceleration table below for reference. When in doubt, roll 2D and divide by the ship's thrust rating. For longer distances, like reaching the 100-diameter Jump distance for a Jupiter-sized gas giant, Referees should roll 4D.

Similarly, Cepheus Deluxe abstracts travel between regions in a system. To determine the amount of time required to travel between two regions in a system, roll 2D to 4D and divide by the ship's thrust rating. This is the number of days needed for transit. For example, travel from Earth to Neptune in a Thrust-3 vessel might require on average 4D days–an average of 14—divided by 3, for 4.7 days. Again, when in doubt, Referees should consult the Travel Times table below to establish a reference.

Travel times are abstracted and, as noted above, generally assume constant acceleration up to the halfway point and then constant deceleration down to the destination. Ships intending to jump will not decelerate towards the jump point. They will emerge from a jump at the speed they entered it.

INTERSTELLAR TRAVEL

Interstellar travel in Cepheus Deluxe uses a faster-than-light engine called the Jump Drive. Jump Drives are rated according to the maximum range in parsecs (represented on the star map as hexagons) they may travel in a single jump. Jump-1 drives can propel a vessel to an adjacent hex, while Jump-3 drives will move a ship up to three hexes. A single voyage through jump-space takes 1 week regardless of the distance traveled. Jump drives require a significant gravity

COMMON INTERPLANETARY TRAVEL TIMES BY ACCELERATION

DESTINATION: IN A REGION (2D-4D HOURS)/THRUST RATING	1-G	2-G	3-G	4-G	5-G	6-G
Planetoid Jump Point	10m	7m	6m	5m	5m	4m
Ground to Planetary Orbit	33m	23m	19m	16m	14m	13m
Ground to Typical Planetary Jump Point	5h, 30m	4h	3h	3h	2h, 30m	2h
Small Gas Giant to Jump Point	12h	8h	7h	6h	5h, 30m	5h
Large Gas Giant to Jump Point	17h	12h	10h	9h	8h	7h
DESTINATION: ANOTHER REGION: (2D-4D DAYS)/THRUST RATING						
Planet to Close Neighbor	1d, 13h	1d, 2h	22h	19h	17h	15h
Planet to Far Neighbor	3d, 17h	2d, 15h	2d, 3h	1d, 20h	1d, 16h	1d, 12h
Mainworld to Close Gas Giant	5d, 16h	4d	3d, 7h	2d, 20h	2d, 13h	2d, 8h
Mainworld to Far Gas Giant	6d, 23h	4d, 22h	4d	3d, 11h	3d, 3h	2d, 20h

well, like a star system, at both ends of the jump, but not too much gravity. It is impossible to purposefully jump to a destination without a star system. Jump drives are safe to use only at a certain distance from a planetary or stellar body. This is called the Jump Point or Jump Distance. A jump requires an amount of liquid hydrogen fuel equal to 10% of the ship's volume per parsec traveled. For example, a 200-ton ship making a 3-parsec jump would burn 60 tons of fuel.

The jump drive propels the ship into a parallel dimension, called Jump Space. The jump fuel serves to envelope the ship with a hydrogen bubble, at a distance of approximately 5m in every direction from the hull – the so-called "Jump Bubble" – to protect it from the alien nature of Jump Space. Characters can safely go on EVA within the bubble but will be lost if they leave it and enter real, unprotected Jump Space – even if still tethered to the ship.

Interstellar Jump Procedure

1. **Calculate Plot**: A jump requires a course calculation called a "jump plot". Starports rated D or better sell up-to-date jump plots to nearby populated worlds for Cr1000 per parsec. A skilled pilot can also calculate their own jump plot. Throw Piloting/EDU 6+ to calculate a jump plot, apply a negative DM equal to the number of parsecs the jump will travel; this takes 1Dx6 minutes (i.e., 1D ship combat turns). It is possible to rush this calculation, to guarantee that it will only take one ship combat turn, but the throw is Piloting/EDU 10+. A failed check requires another attempt, or the ship will misjump (see below). It is possible to calculate a jump plot in advance, but it will become out of date within 1 day.
2. **Engage Drive**: Once the jump plot is ready, the ship's engineer must throw Engineering/EDU 6+ to engage the Jump Drive. This procedure takes a second and can be done in the same round as the jump throw itself.
3. **Jump!**: To jump, throw 2D with the following DMs. A throw of 0 or less causes a misjump. A bad jump plot causes an automatic misjump.
4. DM+the Effect of the Engineering throw to Engage the Drive

- DM-1 per day the jump plot is out of date
- DM-2 if the Jump Drive is damaged.
- DM-2 if using Unrefined fuel.
- DM-8 if within a hundred-diameter limit of the nearest planet or star (Not at a jump point)

5. In Case of a Misjump: A misjump causes a Critical Hit on the ship (see the space combat rules) and may destroy it. Furthermore, the ship travels 1D x 1D parsecs in a random direction. If this leads to an empty hex on the map, the ship emerges from the misjump at the closest star system to that empty hex. In case there are multiple adjacent systems, choose one randomly.

Starship Expenses

A starship's owner must handle several expenses, detailed below.

Mortgage

A mortgaged ship's owner must pay 1/320th of the ship's cash price per month for 480 months (40 years). This means that the owner pays 150% of the ship's purchase price back to the bank.

Crew Salaries

A ship needs the following crew-members:

Captain: Cr6000 per month if hired (i.e., when the captain is not the ship's owner/operator). The captain leads the crew and manages the ship and requires at least Leadership 1. Any crew member can serve as captain in addition to another job (at no additional pay), but this limits their capability to lead the crew in battle or other emergencies. Furthermore, a ship can have a captain without the Leadership skill, but such captain will be unable to use the special captain actions described in the Space Combat chapter. A dedicated, skilled captain is essential if the ship expects combat.

Pilot: Cr6000 per month. Requires at least Piloting 1. The Pilot flies and maneuvers the ship, as well as plots interplanetary movement and interstellar jumps. Every ship requires a pilot. Military ships will have more than one pilot in the event of crew casualties.

Sensor Operator: Cr3000 per month. Requires at least Computer 1. Many civilian ships forgo this position and have the pilot operate the ship's sensors, but this limits their utility in the case of an emergency or combat. For this reason, military vessels will have dedicated sensor operators. A ship can have a single Sensor Operator, though military craft often carry multiple Sensor Operators in the event of crew casualties.

Engineer: Cr4000 per month. Requires the Engineering skill at level 1. The Engineer maintains the ship and operates its drives. Any ship must have at least one engineer with Engineering 1 per 35 tons of drives and power plant. An engineer with Engineering 2 could run 70 tons of drives and power plants. Ships with less than 35 tons of drive and power plant do not require a full-time engineer. On larger ships, the engineer may have assistants, who are also required to have at least Engineering-1 so that there is one level of Engineering per 35 tons of drives and power plant.

Medic: Cr3000 per month. Requires at least Medicine 1. At Medicine 2 or better, the Medic is referred to as the Surgeon. The Medic provides medical care to passengers and crew and oversees any Low Berths. Any legitimate ship carrying passengers requires a Medic, and many ships without passengers employ one to care for the crew. Each level of the Medicine skill allows the Medic to care for 50 crew and passengers.

Purser: Cr3000 per month. Requires at least Admin 1. The Purser manages the ship's accounts and supplies. This position is often combined with another job, usually the Steward, with no additional pay. Smaller ships with a single Steward rarely have a Purser.

Gunner: Cr1000 per month. Requires at least Gunnery 1. Any armed ship requires one gunner per turret unless the guns are automated.

Security and Marines: Cr1000 per month. Requires at least Gun Combat 1. This position is optional. Security personnel protect a civilian starship against criminals and pirates. They are most often called upon to handle rowdy passengers. Military ships often carry marines for boarding actions and planetary operations.

Steward: Cr1000 per month. Requires at least Steward 1. **Any** ship carrying passengers requires one or more Stewards to care for passengers., as described later in this chapter.

FUEL

Interstellar jumps require **liquid hydrogen fuel**. Starports rated A or B sell refined fuel at Cr500 per ton. Starports rated A to D sell unrefined fuel at Cr100 per ton. Military or exploration ships usually have on-board fuel processors capable of refining fuel; small commercial ships often avoid using refineries to save cargo space and because the purification process is too long to be economically viable.

Ships may refuel, free of charge, by two other means:

A ship can **draw water** from any world with a hydrographic rating of 1 or higher. Fuel extracted in this manner is unrefined. Most worlds with starports discourage or ban this practice, but it is a common practice on the frontier. Consider water drawn in this manner Unrefined Fuel. Drawing water takes 1 hour per 20 tons of water.

A ship can **scoop** gas giants for hydrogen fuel. Fuel gathered in this manner is unrefined. This takes 1D hours per 40 tons of fuel. Note that gas giants are a favorite ambush spot for pirates. Fuel scooped from a gas giant is Unrefined.

Fuel processors, if installed, can refine unrefined fuel into refined fuel. A ton of fuel processing equipment can refine 5 tons of unrefined fuel into refined fuel per day.

LIFE SUPPORT

Each person, passenger, or crew incurs a cost of Cr2000 per month for life support, other expenses, and overhead. Luxury life support—gourmet food and other luxurious amenities—costs Cr4000 per month. Note that High Passage does not require luxury life support. However, advertising luxury life support grants an additional die to the High Passenger availability roll at Starports rated C or better on the **Available Freight and Passengers Table** below.

Each occupied Low passenger berth costs Cr100 per month for life support in standard travel. Low berth occupants can survive much longer – decades or more – without external life support by putting the passenger into Deep Freeze, but that imposes DM-2 penalty on their revival throws.

Purchasing life support in bulk reduces costs and allows the ship to operate for a longer time away from port. A ton of life support supplies – enough for 20 persons for a month – costs Cr34000 instead of Cr40000.

PORT FEES

A standard starport berth costs Cr100 for 6 days, and Cr100 per day afterwards. Port fees can vary widely on the frontier.

MAINTENANCE

Ships require maintenance work at a starport rated C or better once per year. This costs 0.1% of the ship's listed price. If the ship skips maintenance, the Engineer must throw Engineering/INT 8+ each month to avoid a mishap; each mishap means that a single ship system has broken down: roll a single combat Hit and apply the damage to the vessel. Apply a DM-1 for every additional month of maintenance skipped. However, reroll any "Critical Hit" results rolled in this case: ships do not explode due to faulty maintenance. At least, not normally.

STARSHIP REVENUE

Ships generate revenue by carrying passengers, freight, mail, or by hiring out as charters. Speculative trade, described in the Speculative Trade chapter, can also generate revenue.

PASSAGE

There are five types of ship passage tickets. Prices are per parsec traveled. For example, traveling two parsecs by Jump-2 by Middle Passage would cost Cr16000 and take one week. The same ticket bought on a Jump-1 ship would cost the same but take 2 weeks minimum.

Roll on the Available Freight and Passengers table below for available passengers of each class going to a destination world. A ship may remain in port to look for more passengers; roll again every 3 days after the first six, but they must now use the new number of passengers, even if that number is lower than originally rolled. A ship can take on all or part of the available passengers. Roll an additional die for High Passengers if luxury life support is available.

High Passage is first-class travel with excellent service and cuisine, and costs Cr10000 per parsec traveled. The baggage allowance is 1000kg. The ship's Steward can serve 3 High Passengers during the journey per level of the Steward skill. Steward-0 does not count for the purposes of tending to High Passengers. For example, Steward-2 allows the steward to care for up to 6 High Passengers. It is normal for a ship to "bump" a Middle Passenger or two Steerage Passengers in favor of a late-arriving High Passenger. In this case, the bumped passenger's ticket is refunded, but there is no further compensation.

Middle Passage is standard travel with normal service and cuisine, and costs Cr8000 per parsec traveled. The baggage allowance for Middle Passage is 100kg. The Steward may serve 6 Middle Passengers for each level of Steward skill. Steward-0 does not count towards tending Middle Passengers.

Steerage Passage is economy-class travel at double occupancy (2 passengers per stateroom) with simple self-service cuisine. Steerage costs Cr3000 per parsec traveled. The baggage allowance for Steerage is 20kg. Each level of the Steward skill, including Steward-0, allows the steward to serve 12 Steerage passengers.

Low Passage means traveling in cryo-sleep. This is unsafe, but cheap, and costs Cr1000 per parsec traveled. The baggage allowance for Low Passage is 10kg. Cryo-sleep is dangerous and potentially lethal. The ship's Medic throws Medicine/EDU 6+ to safely thaw and revive Low Passengers. Apply the passenger's END DM to this throw as well. Failure means that the passenger dies from cryogenic shock. In the absence of a medic, the low berth (cryotube) itself can revive its occupant with an effective Medicine skill of 0 and an EDU modifier of +0. A natural throw of 2 always kills the Low Passenger, regardless of the Medic's abilities or the passenger's END.

A ship's captain may hire an individual to fill a vacant position on a starship by arranging **Working Passage**. This provides the passenger with free travel, accommodations, and food in exchange for working at that shipboard post. The baggage allowance is 1000kg. Labor laws often require that the captain hire the passenger on as crew at full salary if they continue to work for more than three jumps.

Stowing Away on a starship is ill-advised. If caught and handed over to the authorities, the stowaway will go to prison. Some captains avoid the hassle of dealing with planetary legal bureaucracies by throwing the stowaway out of the airlock or selling them to slavers or organ-leggers.

Note that each level of Steward skill can serve either 3 High Passengers, or 6 Middle Passengers, or 12 Steerage passengers. For determining the maximum number of passengers a steward can tend to, consider each level of Steward skill as a point: each point can be allocated to serve only one class of passengers.

For example, a steward with the Steward-1 skill can serve 3 High Passengers, or 6 Middle Passengers, or 24 Steerage Passengers (since Steward 0 can cover 12 Steerage already). That same steward could not manage 2 High Passengers and 2 Middle Passengers. A steward with Steward-2 may serve 6 High Passengers, or 12 Middle Passengers, or 36 Steerage Passengers – or 3 High Passengers, 6 Middle Passengers and 12 Steerage passengers, or 3 High Passengers, and 24 Steerage Passengers, and so on.

BULK FREIGHT

A ship can transport cargo in bulk. This pays Cr1000 per ton of cargo per parsec jumped. For example, transporting a ton of cargo in a single Jump-2 pays Cr2000. Roll on the Available Freight and Passengers table below above for available freight going to a given destination world. A ship may remain in port to look for more cargo; roll again every 3 days. A ship can take

AVAILABLE FREIGHT AND PASSENGERS TABLE

DESTINATION STARPORT CLASS	FREIGHT (TONS)	HIGH PASSENGERS (CR10000/PC)	MID PASSENGERS (CR8000/PC)	STEERAGE PASSENGERS (CR3000/PC)	LOW PASSENGERS (CR1000/PC)
A	3Dx10	3D	3D	4D	3Dx3
B	3Dx5	2D	3D	4D	3Dx3
C	3Dx2	1D	2D	3D	3D
D	3D	0	1D	2D	2D
E	1D	0	1D/2*	1D	1D
X	0	0	0	0	0

all or part of the available cargo. A ship may break up the available freight but must take the cargo in lots of each die rolled. For example, if the ship is going to a Class B starport, there is 3Dx5 tons of freight available. The Referee rolls the 3D getting a 5, 3, and 6 – therefore, there are 3 available lots of freight 25 tons, 15 tons, and 30 tons. A ship's Purser may select any or all of the lots but must take them in the full tonnage of each lot.

The above availability numbers assume a tramp freighter with no fixed schedule. The Referee should allow DMs if the ship sets up a regular schedule between worlds. Rates are in Credits per Parsec traveled.

Mail and Incidentals

An armed merchant of good repute can sign up to carry 5 tons of mail. This pays Cr25000 per parsec. Throw 1D-1 for the actual tonnage of mail carried (minimum 1 ton).

Other ships may carry private messages and parcels to a specific location. This pays Cr20 to Cr120 (Referee's discretion) per message or parcel. As a rule of a thumb, one ton of cargo can contain up to 50 typical parcels. Messages are electronic, and the ship's computer may hold an effectively limitless number of them.

Charters

A private individual or concern may charter a ship. Payment for in-system charters is Cr4 per ton of the ship per hour, with a 12-hour minimum. For example, a 100-ton scout would cost Cr400 per hour, minimum Cr4800. Payment for interstellar charters is in 2-week blocks at Cr3000 per ton of cargo hold plus Cr24000 per passage stateroom and Cr3000 per low berth. The owner of the vessel still pays the overhead and supplies a crew. For example, a 100-ton Scout has four staterooms (Cr96000), one low berth (Cr3000), and 14 tons of cargo (Cr56000) for a total potential of Cr155000 for a charter of two weeks. Details of possible charters are left to the Referee.

Electronics, Sensors, and Detection

All starships have a computer and assorted electronics and avionics. The computer model determines two things. The first is the highest jump rating the ship can achieve, and the other is a DM to all sensor throws, as shown in the following table.

Detecting Other Vessels

The ability to detect other starships in space is a function of range, the ship's sensor suite, the sensor operator's talent, and the amount of electromagnetic noise a target vessel is emitting. If a ship is broadcasting a transponder signal, it can be detected automatically anywhere in a given system, barring intervening EM interference.

ELECTRONICS AND SENSORS TABLE

ELECTRONICS	SENSOR DM
Baseline	DM-4
Model/1	DM-2
Model/2	DM+0
Model/3	DM+1
Model/4	DM+2
Model/5	DM+2
Model/6	DM+3
Model/7	DM+4
Model/8	DM+5

If a ship is in the same region as the scanning ship, but is not broadcasting a transponder signal, then throw Computer/INT 10+ to detect it. Apply the ship's Sensor DM to this throw. The Referee may determine various additional DMs to this throw based on the situation. A scanning ship that detects another ship reveals itself to the target as well. To avoid this, many ships will use only passive sensors to scan for other vessels. Apply a DM-2 penalty to the throw when using passive sensors. Apply a DM-4 to all detection throws when the target vessel has a **stealth** hull (see the Ship Construction chapter). When attempting to detect small craft, apply a DM-2 penalty to the throw. A scanning ship may attempt to detect a ship in the same region once per day, or whenever the target ship enters the same region as the scanning ship.

To determine the Encounter Range, roll 1D and add the Effect of the Computer/INT 10+ Detection roll above. The result is the number of hours at 1G thrust that it will take to intercept (or be intercepted by) the other vessel, with a minimum of 6 minutes (one Space Combat Round). Divide this time by the thrust rating of the ship's maneuver drive to determine the actual time to intercept. *For example, if a Thrust-2G freighter detects a vessel with an Effect of 3 and a 1D roll of 2, it will take 3 + 2 = 5, divided by 2, or 2.5 hours to intercept the encounter. The Referee should similarly determine if the NPC encounter detects the PC vessel. If the Encounter Range is greater than that of the PCs', that just means that the NPCs had the PC vessel on their scopes for longer.*

Disappearing from a scanning ship's sensor data is very difficult. Throw opposed Computer/INT, applying all standard modifiers. The scanning ship gains a DM+4 on the throw. Referees might give an

evading ship a positive DM for hiding in an asteroid field, the atmosphere of a gas giant, or in some other environment that might provide sufficient cover.

Detection and avoiding detection in combat, and other useful combat applications of sensors, are described in the Space combat chapter.

STARSHIP ENCOUNTERS

Space is indeed vast, however most travel between stars happens in well-defined regions of solar systems: jump points, near gas giants, and near stations and smuggler caches. Thus, there are opportunities for random encounters. We present a simple set of rules to help GMs generate and develop space travel encounters for itinerant merchants, smugglers, pirates, and their ilk. These encounters can be used to spice up an adventure with something unexpected or can serve as the structure of the entire adventure, depending on the GM's preference.

SYSTEM TYPES

Each system has a traffic and safety level that determines how likely and how dangerous an encounter might be. Below are eight system types. We encourage GMs to come up with their own system types for their campaigns.

Middle of Nowhere: Nothing ever happens here, and why would it? This system is too far off the space lanes, or too poor, to attract much attention.

Bandit Territory: this backwater is home to pirate raiders and other criminals. Unfortunately, the system is not important enough to send a patrol ship to deal with the problem.

Going Concern: These prosperous systems are happy to engage in legal trade. There are regular naval patrols, and healthy levels of traffic.

Rail Head System: This system is either a free port, or on the frontier. Either way, there is a lot of economic opportunity here: trade is plentiful, as is crime.

Wild West System: There is little law and order in these busy systems, but enough valuable trade happens to make traveling here worthwhile, for the very enterprising, foolhardy, or desperate.

Capital: These systems are perfect examples of peace, security, and prosperity. Capital systems are usually the busiest in the sector and their space lanes are heavily patrolled. There is a lot of money to be made here, but most free-spirited traders will resent the high taxation that is the price for peace and prosperity.

Bazaar: Traders' paradises, Bazaar worlds have everything to offer ambitious entrepreneurs. Nearly anything is available to be bought or sold in a Bazaar. There is just enough law and order here that pirates, and other criminals can't operate openly.

Hive of Scum and Villainy: A free-for-all of corruption, iniquity, crime, and opportunity. Laws in these systems, when they are enforced, exist to maintain a thin veneer of civilization for the purposes of encouraging trade.

SHIP ENCOUNTER TABLE

2D	MIDDLE OF NOWHERE	BANDIT TERRITORY	GOING CONCERN	RAILHEAD	WILD WEST	CAPITAL	BAZAAR	HIVE OF SCUM & VILLAINY
2	-	-	-	-	-	-	-	-
3	-	-	-	-	-	Research	Scout	Salvage
4	-	-	-	-	-	Yacht	Yacht	Salvage (P)
5	-	-	-	Scout	Trader (P)	Trader	Salvage (P)	Trader
6	-	-	Trader	Trader	Trader	Trader	Trader (P)	Trader (P)
7	-	Salvage (P)	Liner	Liner	Liner	Liner	Trader	Trader (P)
8	Trader (P)	Trader (P)	Yacht	Trader (P)	Salvage (P)	Salvage	Liner	Liner
9	Salvage	Scout (P)	Scout	Scout (P)	Research	Patrol	Patrol	Pirate
10	Patrol	Pirate	Patrol	Patrol	Scout	Warship	Pirate	Research
11	Scout (P)	Scout	Salvage	Salvage	Pirate	Yacht	Research	Yacht (P)
12	Trader	Patrol	Patrol	Research	Patrol	Scout	Scout	Scout

**A (P) in the entry notes that this ship is willing and able to turn pirate should the PC vessel be an opportune target. The NPC Reaction Roll should give the GM more guidance as to how to play an opportunistic pirate*

Encounter Generation Procedure

1. Determine if there is an Encounter by rolling on the appropriate System column of the Encounter Table
2. Determine the Encounter Range
3. Determine NPC Reaction Result

Ship Encounter Table

The NPC Reaction Roll (below) should give the GM more guidance as to how to play an opportunistic pirate.

Ship Descriptions

Encounters need not be limited to the ship types described below. GMs should feel free to develop their own encounter tables for their most often visited

Encounter Frequency, Detection, and Range

The GM should roll for encounters whenever the PCs enter a new system, or new region in a system. For example, when transiting from a mainworld to a

SHIP DESCRIPTIONS TABLE

SHIP ENCOUNTERED	DESCRIPTION
Scout	Small ubiquitous ships transporting information or something more tangible.
Salvage/Miner	Common system ships that locate raw or recyclable materials and extract them. Grimy and unglamorous.
Research	Advanced ships with high tech toys, staffed with bored crew and science nerds.
Yacht	A plaything for the very wealthy. Usually unarmed and filled with luxuries. Some are very advanced.
Liner	Large ships designed to haul large numbers of passengers. Some are little more than glorified long-haul buses, while others are spectacularly opulent cruise ships.
Merchant	A class of ships encompassing free traders hopping from system to system, to large corporate freighters hauling bulk cargoes on the space lanes.
Patrol	Smaller military or police vessels that keep the peace and discourage piracy.
Warship	Dedicated combat vessels, including small battlegroups.
Pirate	This represents a full-blown pirate or privateering warship: a corsair or other heavy gunboat dedicated to piracy.

SHIP ENCOUNTER REACTION TABLE

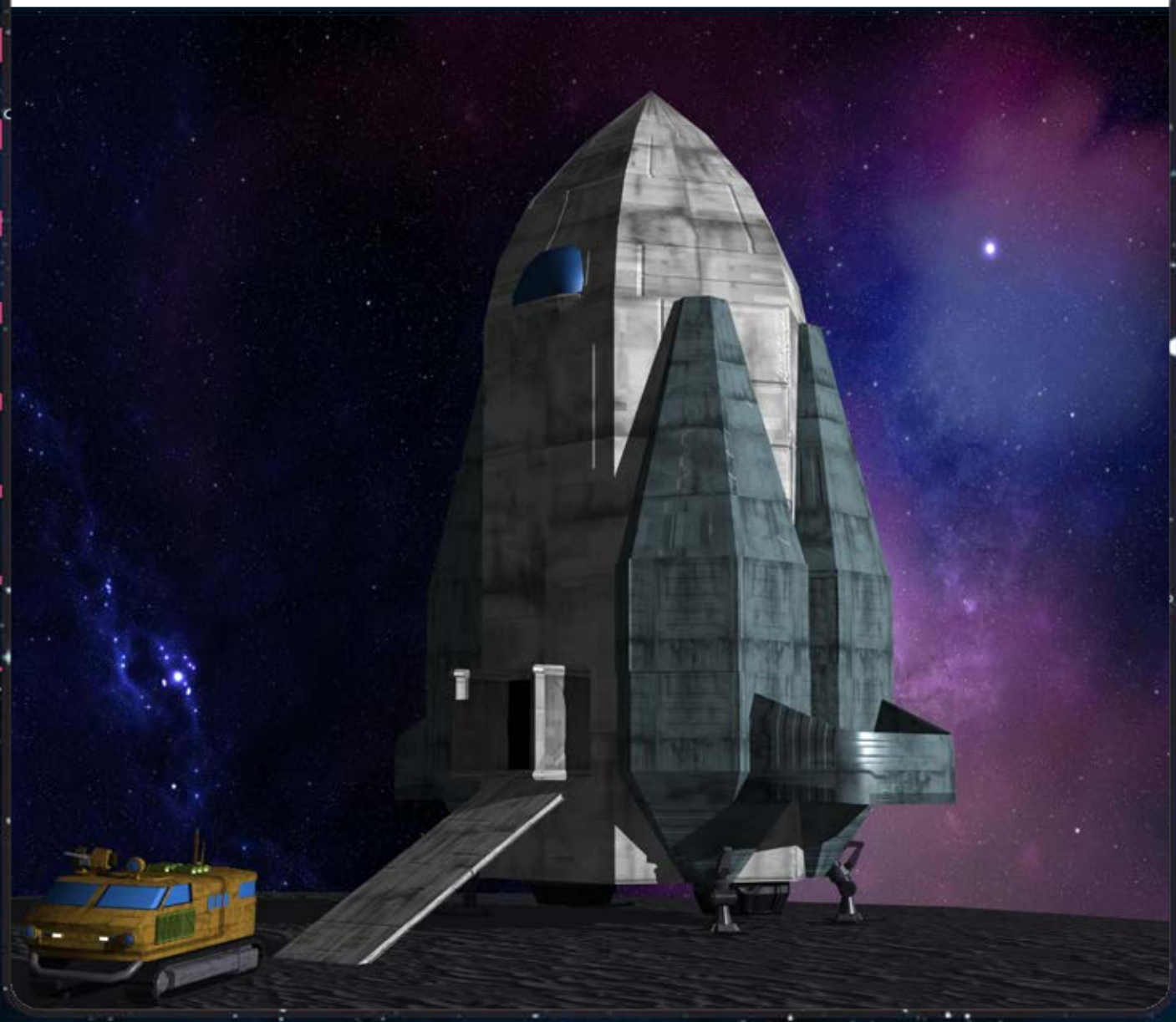
2D	RESULT	ATTITUDE	POSSIBLE ACTIONS
2	Hostile	The NPC will immediately attack (if stronger), or actively spoil whatever the PCs are doing.	Attack, interfere, or flee. Civilian vessels marked (P) will go pirate against the PCs at the earliest opportunity. If the PCs are obviously more powerful, the NPC will leave.
3-5	Unfriendly	The NPC will do anything short of outright hostile action. They are unhelpful and untrustworthy.	The NPC won't initiate hostilities but will otherwise avoid any dealings with the PCs. If forced to interact, the NPC will lie, misdirect, and otherwise waste time, hoping to cause the PCs problems.
6-8	Indifferent	The NPC is uninterested in helping or hindering the PCs.	The NPC ship will exchange normal ship ID protocols but will respond warily and neutrally otherwise.
9-11	Friendly	The NPC is cooperative and friendly.	The NPC ship will give information and render limited aid if possible. The NPC will not act against the PCs.
12	Helpful	The NPC is interested in helping or fully cooperating with the PCs.	The NPC are willing to help get the PCs out of trouble. They will lie to naval patrols and help spoof sensor sweeps. The NPC will join the PCs' cause with very little convincing.

system's gas giant, roll when the ship arrives at the gas giant.

To determine if the PCs detect the encounter, as well as the Encounter Range, the ship's sensor operator makes a Computer/INT 10+ detection throw, as per the Detection rules above.

SHIP ENCOUNTER REACTION ROLL

The table includes standard NPC Reactions on a 2D roll. As well, we have included some examples of likely attitudes and actions for each Reaction result to help as GM prompts in the context of spacecraft encounters. Remember to use common sense and interpret the NPC Reaction roll in the context of the specific encounter. GMs should use the NPC Reaction Roll to differentiate between otherwise similar starship encounter results. This keep the players guessing.



TRADE AND SMUGGLING

A ship can generate a steady profit from hauling cargo and passengers. However, speculative trading offers a chance for far greater profits – at the risk of significant losses. The following simple system is designed to allow merchant traders to engage in speculative trade.

SPECULATIVE TRADE PROCEDURE

For speculative trade, follow the procedure below:

1. Find a supplier.
2. Determine goods available.
3. Determine purchase price.
4. Travel to a new world.
5. Find a buyer.
6. Determine sale price.

Remember the first rule of trading: Buy low, Sell high.

1. FIND A SUPPLIER

Throw the listed skill below to find a supplier. If you fail the throw, you may look for additional suppliers, but at DM-1 per previous attempt per planet per week.

To find a corporate supplier, throw Liaison/SOC 8+.

To find a black-market supplier for illegal goods, throw Streetwise/INT 8+.

To find a private supplier, throw Carousing/SOC 8+.

DM+6 for Starport A; DM+4 for Starport B; DM+2 for Starport C; DM -1 for Starport D and DM-2 for Starport E.

2. DETERMINE GOODS AVAILABLE

There are two types of goods – common and trade. A given supplier has all Common Goods and 1D randomly chosen trade goods. To the 1D roll, apply DM+1 if Starport C, DM+2 if Starport B, DM+4 if Starport A, or DM-2 if Starport E. This can never be less than one. Throw "D66" on the following table to determine available trade goods. This means throwing 2D, but rather than adding them together, read them consecutively, that is – one as the "tens" digit and the second as the "ones" digit. Remember to declare which is which before rolling.

Ignore the results of 61-65 unless dealing with a black-market dealer – these goods are universally illegal or otherwise highly questionable.

If certain regular trade goods are illegal on a planet, a black-market supplier will offer them as well. The Referee should use the world's Law Level as a guide to what is legal and illegal on a particular world.

SMUGGLING

Running contraband–such as results 61-65 on the trade table–means running the risk of being caught by the authorities. Apart from inspection by patrol boat in space, covered by the ship encounter rules in this book, selling or buying illegal goods is likely to attract unwanted law enforcement attention:

To avoid an encounter with law enforcement while smuggling, throw 2D against the world's Law Level. Failure means some police harassment. Such harassment does not necessarily mean that the characters were caught smuggling, but rather that they are in the risk of being caught; avoiding the Law in such a case is an adventure all by itself. The Referee can abstract this interaction to a single Streetwise or Admin throw to avoid trouble, or fully role-play the encounter.

In cases where goods are deemed illegal due to the local planetary Law Level (see the Worlds chapter), the Referee should apply a DM+1 or DM+2 to the Sale throw on the Modified Price Table, below.

COMMON TRADE GOODS TABLE

ITEM	COST PER TON	TONS	PURCHASE DMS	SALE DMS
Basic Consumable Goods	Cr1000	2Dx5	Ag+3. Ga+2	Hi+1, Ri+2
Basic Electronics	Cr25000	2Dx5	Ht+2, In+4	Ni+2, Po+1
Basic Machine Parts	Cr1000	2Dx5	In+3, Ri+2	Na+1, Ni+2
Basic Manufactured Goods	Cr20000	2Dx5	In+3, Ri+2	Ag+1, Ni+2
Basic Raw Materials	Cr5000	2Dx5	As+3 Ni+1	In+2 Ri+2
Common Unrefined Ore	Cr2000	2Dx5	As+2, Va+1	In+2, Na+1

TRADE GOODS TABLE

D66	TRADE GOODS	BASE PRICE PER TON	TONS	PURCHASE DMS	SALE DMS
11	Advanced Electronics	Cr100000	1Dx5	Ht+2, In+4	Ni+2, Po+1
12	Advanced Manufactured Goods	Cr200000	1Dx5	In+3, Ri+2	Ag+1, Ni+2
13	Agricultural Equipment	Cr150000	1D	In+3. Ri+2	Ag+2, Ga+1
14	Animal Products	Cr1500	4Dx5	Ag+2, Ga+3	Hi+2, Ri+1
15	Collectibles	Cr50000	1D	In+2, Ri+3	Hi+2,Ni+1
16	Computers	Cr150000	2D	Ht+3, In+2	Na+1, Ni+2
21	Crystals and Gems	Cr20000	1Dx5	Ni+3, Na+2	In+1, Ri+2
22	Cybernetic Parts	Cr250000	1Dx5	Ht+3, Ri+2	Na+1, Ni+2
23	Food service equipment	Cr4000	2D	In+3, Na+2	Ag+1, Ni+2
24	Furniture	Cr5000	4D	Ag+2, Ga+3	Hi+1, Ri+2
25	Gambling Devices and Equipment	Cr4000	1D	Hi+2, Ri+3	Na+2, Ni+1
26	Grav Vehicles	Cr160000	1D	Ht+3, Ri+2	Ni+2, Po+1
31	Grocery Products	Cr6000	1Dx5	Ag+3. Ga+2	Hi+1, Ri+2
32	Household Appliances	Cr12000	4D	Hi+2, In+3	Na+1, Ni+2
33	Industrial Supplies	Cr75000	2D	In+3, Ri+2	Na+1, Ni+2
34	Liquor	Cr15000	1Dx5	Ag+3, Ga+2	In+1, Ri+2
35	Luxury foodstuffs and fabrics	Cr150000	1D	Ag+2. Ga+3	In+1, Ri+2
36	Manufacturing Equipment	Cr750000	1Dx5	In+3, Ri+2	Na+1, Ni+2
41	Medical Equipment	Cr50000	1Dx5	Ht+2, Ri+3	Hi+1, In+2
42	Petrochemicals	Cr10000	2Dx5	Na+2, Fl+3	Ag+1, In+2
43	Pharmaceuticals	Cr100000	1D	Ht+3, Wa+2	In+2, Ri+1
44	Complex chemical compounds	Cr7000	4Dx5	In+2, Ri+3	Ni+2, Va+1
45	Precious Metals	Cr50000	1D	As+3, Ic+2	In+1, Ri+2
46	Radioactives	Cr1000000	1D	As+2, Ni+3	In+2, Ht+1
51	Robots and Drones	Cr500000	1Dx5	Ht+3, Ri+2	Ni+1, Ri+2
52	Scientific Equipment	Cr50000	1Dx5	Ht+3, Ri+2	Hi+2, Ni+1
53	Survival Gear	Cr4000	2D	Ga+1, Ri+2	Fl+2, Va+1
54	Textiles	Cr3000	3Dx5	Ag+3, Ni+2	Na+1, Ri+2
55	Uncommon Raw Materials	Cr50000	2Dx5	Ag+3, Ni+2	In+2, Na+1
56	Uncommon Unrefined Ores	Cr20000	2Dx5	As+2, Va+1	In+2, Na+1
61	Illicit Luxury Goods	Cr150000	1D	Ag+2, Ga+3	In+4, Ri+6
62	Illicit Pharmaceuticals	Cr100000	1D	Ht+3, Wa+2	In+6, Ri+4
63	Illegal Medical Research Material	Cr50000	1Dx5	Ht+2, Ri+3	In+6, Na+4
64	Illegal Military Equipment	Cr150000	2D	Ht+3, In+2	Hi+6, Ni+4
65	Illegal Weapons and Armor	Cr30000	2D	In+3, Ri+2	Ni+6, Po+4
66	Highly Unusual Cargo	**	**	**	**

3. Determine Purchase Price

Speculative purchase prices vary wildly based on local supply, political or economic conditions, and the suppliers themselves. To determine the purchase price, throw 2D on the Purchase column of the Modified Price Table, above. The throw is modified by the character's INT or SOC DM (whichever is higher), and by the character's Liaison skill level. Use whichever skill or attribute modifier is greatest and consult the Purchase Price column. Further modify this result by a trade good's Purchase DM based on the world of origin. Only one trade code applies to each transaction – in the case where multiple trade DMs apply to a single world, use the highest one.

Finally, modify the purchase price according to the Traffic and Safety modifiers, described below.

Multiply the base price by the resulting purchase percentage to get the final purchase price per ton. Then multiply that price by the number of tons of goods within a lot to determine the final purchase price of that lot.

Like freight, Common Goods may be purchased in lots of a single die. However, other Trade Goods must be purchased in lots equal to the full tonnage rolled.

4. Selling Goods

The procedure for selling goods is the same as purchasing goods: find a buyer on a new planet using the same skills used to find a supplier. Roll 2D on the Modified Price Table and consult the Sale Price column. The throw is modified by the character's INT or SOC DM (whichever is higher), and by the character's Liaison skill level. Apply the highest Trade Good Sale DM for the world where the goods are being sold to the roll on the Sale Price table. Finally, apply the Traffic and Safety modifiers to the Sale Price column. Selling Characters may avoid selling goods to a certain buyer or on a certain world and may throw again as they

MODIFIED PRICE TABLE

RESULT	PURCHASE	SALE
2-	200%	40%
3	180%	50%
4	160%	60%
5	140%	70%
6	120%	80%
7	110%	90%
8	100%	100%
9	90%	110%
10	80%	120%
11	70%	130%
12	60%	140%
13	50%	150%
14	40%	160%
15	30%	180%
16+	20%	200%

TRAFFIC, SAFETY, AND LEGALITY PRICE MODIFIERS TABLE

STARPORT CODE	TRAFFIC RATING	PURCHASE DM		STARPORT CODE	TRAFFIC RATING	SALE DM
A	High	+2		A	High	-3
B		+1		B		-2
C	Medium	0		C	Medium	-1
D		-1		D		0
E	Low	-2		E	Low	0
X		-2		X		+1
System Color	Safety Rating			System Color	Safety Rating	
Normal	Secure	0		Normal	Secure	0
Amber	Independent	+1		Amber	Independent	0
Red	Dangerous	+3		Red	Dangerous	+2
				Legality (relative to Law Level)		
				Slightly Illegal	+1	
				Highly Illegal	+2	

search for another buyer after one week. Alternatively, they may try their luck on another world.

Traffic and Safety Modifiers

The Trade Goods have Purchase and Sale DMs that reflect the relative supply and demand realities of the world where those goods are being bought and sold. They are fairly comprehensive, but neglect to consider two important factors that impact prices: the relative amounts of traffic and safety that define the world. High traffic drives purchase and sale prices down, as there are more traders and more merchants competing on a given world. Conversely, worlds that see low traffic tend to have higher prices. As well, worlds that are increasingly unsafe see a dramatic rise in prices as fewer and fewer merchants engage in commerce on those worlds.

There are two ways to define traffic and safety levels in Cepheus Deluxe. The "classic" way uses the Starport, and Zone Codes found in the planetary description. A more qualitative method that we include here meshes with the Space Encounter rules found on p.XX, as well as in Stellagama Publishing's Piracy and Privateering rulebook.

Local Brokers

A local broker, well-versed in the local market and well-connected to suppliers and buyers, can improve the trader's chances to gain favorable prices. A broker adds a +DM to purchase and sale price throws but takes a commission from the transaction sum (always paid by the speculative trader). Brokers are always available, limited by the starport class, as noted below.

LOCAL BROKERS TABLE

BROKER DM	COMMISSION	MINIMUM STARPORT CLASS
DM+1	5%	E
DM+2	10%	C
DM+3	15%	B
DM+4	20%	A

There is a Problem with the Deal!

Use this table to throw a curveball in the players' otherwise mundane speculative trading activities. Roll 1D for each column and combine the results into a basic adventure hook. Don't worry if it doesn't fit together seamlessly. Let the players fill in the blanks as the adventure progresses. Note that there is no "suggested solution" column: it's up to the players to solve the situation however they see fit.

Cargo Tags

These cargo tags add an additional layer of adventure to otherwise mundane cargoes that player characters might be hauling or looting, depending on the situation. They are not intended for every cargo, but to help GMs looking for more adventure hooks and plot devices. They can be applied to nearly any cargo, no matter how mundane or illegal. If a result does not make sense, roll again.

Trade Example

Introduction: what we've presented here is a fairly typical trading procedure for a 200-ton Trader—the sort of ship many players will be adventuring in. There are a few things to note regarding the "trading game".

The first, and most important issue, is that it is intended for parties that wish to play a campaign of trading adventures where wheeling-and-dealing, haggling, and conniving their way past governments, criminals, and competitors is the norm. Regrettably, there is a bit of accounting to do here to make sure this works, and if players find this tedious and expect the Referee to do the bean counting for them, then maybe the trading campaign is not for them.

The second issue is that the Trading Rules presented in this chapter are intended to serve two purposes: they provide a consistent framework for engaging in highly risky speculative capitalism, and they serve as a means for the Referee to make adventures happen from the trading rules results. We will try to point out some of the ways for Referees to interpret the dice rolls in the example below to illustrate this point.

Finally, these Trading Rules are not meant to provide a fully functioning economic system that simulates an interstellar economy. They only serve as a "mini-game" in Cepheus Deluxe for those opportunities where players want to try making money on deals.

And now, onto the example:

The planet Alsace has a diameter of 12800km, and a surface gravity of 1.0g. The atmosphere is standard. The surface is covered with 70% water. The world has 60 million citizens in a variety of balkanized governments. The average government imposes a Law Level of 6 restricting all firearms except for shotguns and stunners. Carrying weapons is discouraged. The average technology is TL12. Trade is supported with a Class B starport and a Scout base. The world has the following trade codes: Agricultural, Garden, and Rich. Alsace is a nice world to grow up in, and a better world to leave. The balkanized governments on the world are locked in a constant state of mutual animosity. Raiding and proxy wars between states are all too common, and

WHY HAS THE DEAL GONE BAD? TABLE								
D6	D6	THE DEAL HAS GONE SOUTH BECAUSE...	D6	D6	THE MAIN ANTAGONIST	D6	D6	THE MATTER IS FURTHER COMPLICATED WHEN...
1-3	1	The cargo already belongs to someone else.	1-3	1	Organized crime boss	1-3	1	Another Antagonist gets involved and considers the PCs an enemy.
	2	Trading in this good is strictly regulated.		2	Customs official		2	A natural disaster strikes.
	3	The local rulers seize the cargo.		3	Palace courtier		3	Critical equipment fails.
	4	The cargo is intentionally damaged.		4	Corrupt dockworkers		4	The PCs are implicated as Antagonists themselves.
	5	All ships are grounded until further notice.		5	Military officer		5	The PCs' allies betray them.
	6	Violence erupts at the starport!		6	Environmental activists		6	A Contact requires urgent assistance.
4-6	1	The market is flooded/ emptied of goods.	4-6	1	Terrorist cell	4-6	1	The Antagonist's cause is just.
	2	The payment is less than what was promised.		2	Shrewd commodities merchant		2	The cargo is contaminated with a virulent plague.
	3	The cargo must be collected from an inaccessible location.		3	Corrupt Broker		3	The PCs discover that they are on the wrong side of a trade war.
	4	The cargo is much more valuable than originally thought!		4	Bandits		4	Inclement weather makes cargo loading and flying dangerous.
	5	The local criminal element is interested in the cargo		5	Relic Hunters		5	Local law enforcement takes an unhealthy interest in the PCs' vessel, cargo, or activities.
	6	The PCs break a cultural taboo.		6	Concerned religious leaders		6	The cargo is dangerous, illegal, and powerful.

foreign mercenary armies are the preferred method of settling international disputes. The starport town, Burgess, is neutral ground for all nations on Alsace: a means for every nation and corporate interest to make money, and for disaffected citizens to leave. Using the traffic and safety rules for encounters and trade, Alsace is a Going Concern (Medium traffic, High safety)—not quite a Capital, but it could get there in a generation or two.

The 200-ton TL9 trader *No Refunds* has completed its yearly maintenance at Burgess, and has empty cargo holds. The captain, Beatrice Khatib, is looking for freight, passengers, and cargoes for speculative trade. She is planning on taking the No Refunds to the frontier with a hold filled with goods to sell to the colonists on worlds like Neerja, detailed below.

Khatib acts as the No Refunds' trading representative and has INT and SOC DMs of +1 each. She has Liaison 3, Carouse 2, and Streetwise 2. Her ship's steward Alfonz Trang (also the gunner) has Steward 1.

The Referee rolls to determine how many passengers and of what type are headed to Neerja, which is 4 parsecs away. The Referee consults the Available Freight and Passengers Table, using the starport class of the destination world, in this case a class-E starport. The results are that 2 Middle Passengers, 5 Steerage, and 6 Low passengers are looking to head to Neerja. As well, 5 tons of freight are sitting on a pallet for shipment to the frontier world. The Referee wonders if one of the passengers could serve as an adventure hook: perhaps they are fleeing trouble on Alsace, or

CARGO TAGS TABLE: THE CARGO IS...	
D66	RESULT
11	Exceptionally valuable in the neighboring starport because the regular shipment was lost, and now everyone is desperate for it.
12	Produced by a corporation that has a bad reputation for swindling the local star cluster's inhabitants. Selling this to nearby planets might cause significant problems.
13	Contaminated with a hallucinogenic mold or fungus. It is not lethal, but anyone exposed to the cargo will be a hilarious liability for an entire watch.
14	Of notoriously low quality or workmanship. Refined metals have impurities, foodstuffs are off-color, and computer parts are unreliable.
15	Composed of gray market goods that need offloading discreetly and quickly. Criminals, law enforcement agencies, and the manufacturer are all looking for these pallets.
16	Labeled incorrectly. Upon close examination, the player characters discover that the cargo is something else entirely.
21	The key piece of evidence in an investigation. Law enforcement is very interested in recovering this cargo and won't be inclined to compensate anyone for any losses.
22	Sought after by a local broker who is aggressively cornering the market to drive up prices. It will not do if the PCs sell to anyone.
23	Religiously significant to a militant order of clergy who take offense when the PCs handle the cargo improperly.
24	Infested with a parasitic alien life form inside a badly sealed cargo container. This can be anything from psychic worms to horrible xenomorph face suckers—or worse.
25	Owned by a powerful third party. The PCs are unwittingly stealing from a corporation, crime syndicate, or mercenary outfit!
26	Part of a long-term sting operation. Discreet tracking devices are embedded in the cargo so that law enforcement can monitor criminal migration patterns.
31	Equipped with hidden cameras for a reality TV show about the lives of space pirates, space-criminals, and other space ne'er-do-wells.
32	Coated in a unique preservative. It stinks, it stains, and it is mildly toxic.
33	Infected with a disease. Exposure will result in terrible symptoms for 1d6 days.
34	Politically valuable: a faction on a nearby world wants this cargo to show it is capable of giving the people what they want.
35	Exceptionally badly packed. If there is any violent, sudden movement—say from combat, or atmospheric re-entry—the cargo will spill out everywhere.
36	Utterly mundane, but its markings indicate that it comes from a legendary ship, once thought lost.
41	A dry run for a terror attack. A hidden recorder will provide valuable information for the bombers to carry out their attack later.
42	Fraudulently labeled. The container is filled with illegal goods—drugs, weapons, or even sapient beings in unsafe medically induced comas, stacked like cordwood.
43	Illegal to transport to any system under interstellar peace treaty.
44	Very perishable foodstuffs that need to be stored at exact temperatures or it will spoil.
45	A front for a shipment of stolen cultural relics from a museum. Both the museum and the culture the relics belong to are looking to reclaim what is there.
46	Accompanied by a message to the ship's crew: someone from their past is gunning for them.
51	Too fragile for regular cargo bay storage. It must be kept in a very inconvenient and obvious location in the ship for the duration of the voyage.
52	Packed in dangerous materials that do not respond well to a particulate in the atmosphere of the destination world.

53	Coated in an allergen that will cause a medical emergency among the natives of the next world the cargo visits.
54	The object of interest to a specific starport cargo master or administrator. Red tape will hold up loading until the official is no longer interested in the cargo.
55	Infested with mold. 1d100% of the goods are ruined.
56	Subjected to a newly instituted tariff that will erode any profit margins the players were counting on—if they trade legally.
61	A religious taboo on this world. If a native sees the cargo being loaded, the entire crew will be shunned until they undergo a brutal purification ritual.
62	Never bought or sold outside the purview of a local corporate cartel. Breaking the rules might lead to great difficulties in finding new cargos anywhere on this planet.
63	Is annoying a local oligarch. They let the crew know that they will be there soon to collect it.
64	Stolen out of the crates from the starport before it can be loaded onto the ship!
65	Of a higher quality than normal. This will attract undue attention from criminals, corporate agents, and every manner of grafter in the port.
66	Totally normal and innocuous. Nothing is wrong. You can breathe easy.

they are off to make their fortune on the frontier of Neerja. They might just serve as color for the trip.

The *No Refunds* has 10 staterooms, with 5 currently occupied by crew. Since Trang has Steward 1, he can care for the 2 Middle Passages, which leaves 3 empty staterooms left. That means that the 5 Steerage passengers can be taken on at double occupancy, with one lucky Steerage Passenger having a stateroom all to themselves. The ship has 20 Low Berths, so the 6 souls who need to get to Neerja on the cheap are easily accommodated there.

Speculative Trade Procedure

1. Find a supplier:

Before agreeing to take on the 5 tons of freight, Beatrice decides to see what sort of trade goods are available on Alsace. She has 1.1MCr available for speculative trade after paying for salaries and maintenance. She decides to find a Corporate supplier and throws Liaison/SOC 8+: 8 + 3 (Liaison) + 1 (SOC) = 12, which is more than sufficient to find one. In fact, with a high Effect 4, it's possible that the broker found Beatrice… Note that characters who are pressed for time or feeling uncertain about their chances might have better luck using a Contact to find a broker.

2. Determine Goods Available:

The Corporate supplier has the following Common Goods in the quantities below:

Remember to only apply the highest trade code DM.

Judging by what prices might be on Alsace and what demand might be on Neerja, it makes sense for Beatrice to purchase Basic Machine Parts and Basic Manufactured Goods. She makes a note and sees what more unique items the Corporate supplier has for sale: 1D + 2 (B-class starport) = 7 trade goods.

Rolling D66, the trade goods available are:

Remember to only apply the highest Trade Code DM for a given trade good.

The Referee rules that Alsace will have a Purchase DM+1 for being at the high end of the Medium Traffic scale. As well, since only the highest trade code DM is applied, we ignore the Ga+2 DM for Basic Consumable Goods. Neerja has a Sale DM-1 for having Medium Traffic, despite having only an E-class starport. The Referee should try to be consistent with modifiers, but we also encourage a bit of variation for trading, since there might be low-quality starports that see an awful lot of traffic anyways.

3. **Determine Purchase Price:**

While the Robots and Drones look attractive, their eye-watering price is too much for Beatrice. However, the Advanced Manufactured Goods look very attractive, so Beatrice decides to negotiate for those. She rolls 2D on the Modified Price Table: 10 + 2 (Rich) + 1 (Traffic) + 1 (SOC) + 3 (Liaison skill) = 17, which reduces the price to 20% of the listed value! The Advanced Manufactured Goods are going for Cr40000 per ton! What a bargain! Beatrice does the math and purchases 27.5 tons of Advanced Manufactured Goods, which is her entire Speculative Trade budget. She might have gone for a more diverse portfolio of trading goods normally, but the price on those Advanced Manufactured Goods was just too low to pass up.

This seems like a stroke of luck, but canny Referees might think about why a 30-ton lot of high-end manufactured goods are going for bargain basement prices. Perhaps they are gray-market goods, or they're especially difficult to transport. Perhaps there's some corporate fraud or other white-collar crime that has

COMMON GOODS AVAILABLE (EXAMPLE)				
COMMON GOODS	COST PER TON	TONS	PURCHASE DMS (ALSACE)	SALE DMS (NEERJA)
Basic Consumable Goods	Cr1000	45	Ag+3	
Basic Electronics	Cr25000	40		Ni+2,
Basic Machine Parts	Cr1000	30	Ri+2	Ni+2
Basic Manufactured Goods	Cr20000	55	Ri+2	Ni+2
Basic Raw Materials	Cr5000	35		
Common Unrefined Ore	Cr2000	45		

TRADE GOODS AVAILABLE (EXAMPLE)				
TRADE GOODS	COST PER TON	TONS	PURCHASE DMS (ALSACE)	SALE DMS (NEERJA)
53—Survival Gear	Cr4000	7	Ri+2	
51—Robots and Drones	Cr500000	20	Ri+2	Ni+1
23—Food Service Equipment	Cr4000	7		Ni+2
43—Pharmaceuticals	Cr100000	2		
15—Collectibles	Cr50000	2		Ni+1
42—Petrochemicals	Cr10000	45		
12—Advanced Manufactured Goods	Cr200000	30	Ri+2	Ni+2

PASSENGERS AND FREIGHT (EXAMPLE)					
CARGO	AMOUNT	PRICE/PARSEC	PARSECS TRAVELLED	SUBTOTAL PRICE	TOTAL PRICE
Middle Passage	2	8000	4	32000 each	64000
Steerage Passage	5	3000	4	12000 each	60000
Low Passage	6	1000	4	4000 each	24000
Freight	5 tons	1000 per parsec	4	4000/ton	20000

SALES PRICE (EXAMPLE)				
TRADE GOODS	COST PER TON	TONS	PURCHASE DMS (ALSACE)	SALE DMS (NEERJA)
12 Advanced Manufactured Goods	Cr200000	30	Ri+2	Ni+2

Neerja has a Sale DM-1 for having Medium Traffic.

occurred, and Beatrice is at the end of a major money laundering operation. In fact, the Referee decides that this might be an excellent time to throw Alsace's Law Level of 6+: a result of 4 indicates that before the No Refunds leaves the world, they will have an entanglement with some police, or starport legal administrators. This, however, is beyond the scope of this example.

4. Travel to a New World

The *No Refunds* loads up the 2 Middle Passengers, 5 Steerage Passengers, 6 Low Passengers, 5 tons of Freight, and 27.5 tons of Advanced Manufactured Goods, and travels to Neerja:

Neerja, has a diameter of 11200km and a surface gravity of 0.9g. The atmosphere is standard, tainted. The surface is covered with 90% water. The world has 20000 citizens without any government to speak of. The government imposes a Law Level of zero, restricting no weapons. The average technology is TL7. Trade is supported with a Class E starport. The world has the following trade codes: Non-Industrial, Amber Zone. Neerja is a Wild West planet (Medium traffic, Low safety), with very few laws, and minimal enforcement.

Neerja is a recently settled frontier colony world, and is a busy place: prospectors, miners, outlaws, lawmen, and colonists all congregating there, looking to find rich mineral deposits, plant or xenofauna that may

have pharmaceutical applications, or just cheap land for speculation. Neerja is starting to boom, and the No Refunds has recently landed at Neerja's starport town, Gillich.

5. Find a Buyer

The wild west frontier planet of Neerja is quite unlike the boring Alsace. Setting to work immediately upon arrival, the crew collects their payment for passengers and freight:

That's a total of Cr168000, which is going to be useful to pay the crew, and the upkeep for the ship.

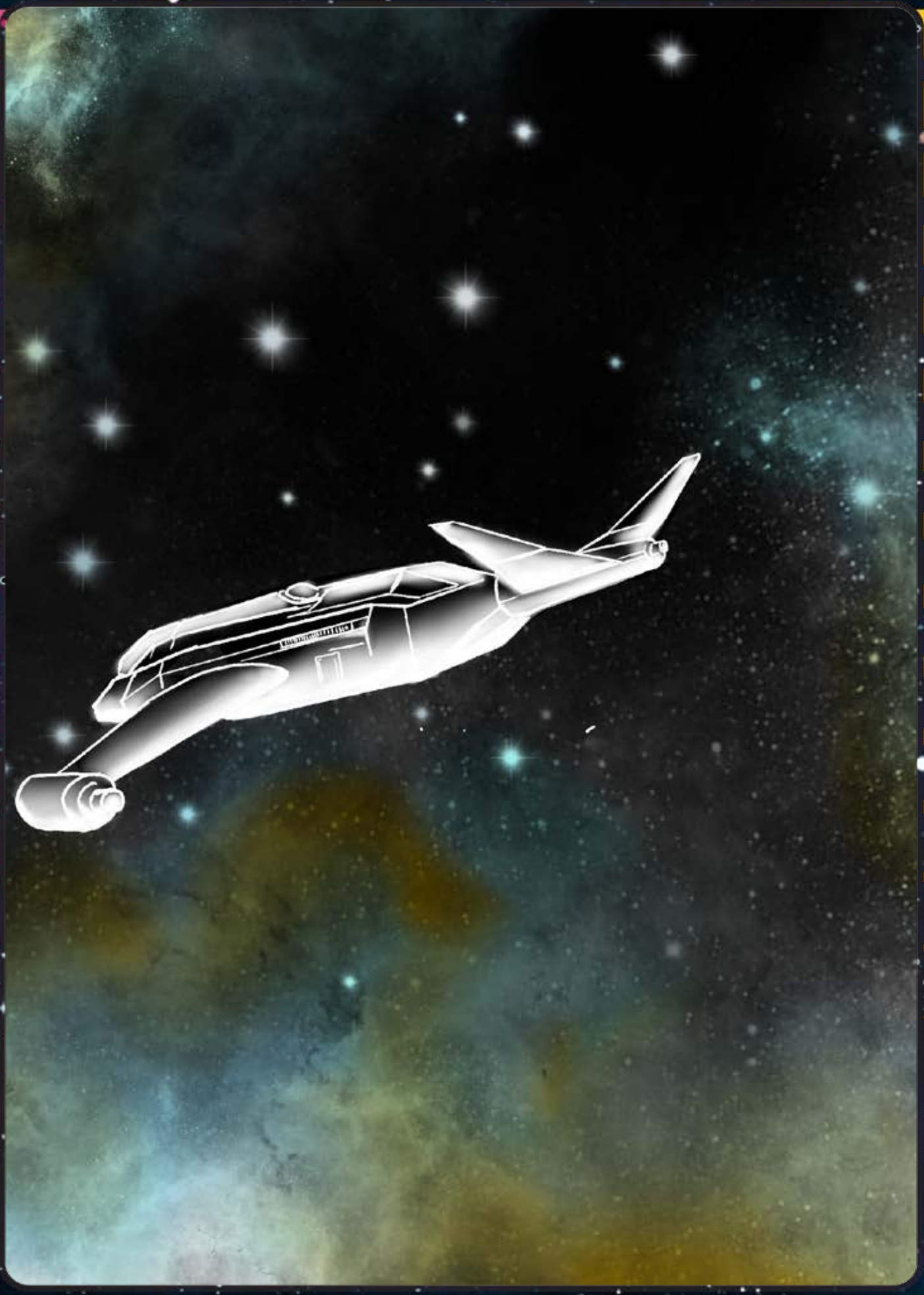
Beatrice Khatib ventures out with two of her more security-minded crew to find a buyer for their valuable cargo of Advanced Manufactured Goods. The search for a buyer on a lawless frontier planet like Neerja could be an adventure in and of itself. The Referee decides that there is no corporate buyer on Neerja yet, so Beatrice will have to search for Private, or Black Market buyers. She decides that avoiding criminal elements might be the wisest thing to do and throws Carouse/SOC 8+: 3 + 1 (SOC DM) + 2 (Carouse skill) = 6. That's not good, she can't find a private buyer for her trade goods. Time is money, so Beatrice rolls to find a private buyer again, this time at DM-1: 6 + 1 (SOC DM) + 2 (Carouse skill) – 1 (per week penalty) = 8. She finds someone with a warehouse and the funds.

6. Determine Sale Price:

Beatrice consults the trade code Sale DMs for Advanced Manufactured Goods:

Neerja has a Sale DM-1 for having Medium Traffic.

The throw on the Modified Price Table is: 6 + 2 (Non-Industrial Trade Code) – 1 (Neerja traffic DM) + 3 (Liaison skill) + 1 (SOC DM) = 11 for a sale price of 130% of listed value: that's Cr260000 per ton. Beatrice offloads the Advanced Manufactured Goods and accepts payment. That's 27.5 tons x 260000 = MCr7.15. Her profit is MCr6.05, which is a significant windfall. She now has to get people and goods onto the No Refunds at Neerja, and then get off the planet before someone learns that she's flush with cash. The crew should be on their guards, and the Referee should probably throw some curveballs their way to make their extremely profitable deal just that much more memorable.



SHIP DESIGN

Starships come in many shapes, configurations, and sizes. Players will typically operate a small vessel, though larger-scale naval, exploration, or merchant-marine campaigns are also possible. This chapter presents a system for designing ships from scratch and for upgrading existing ships.

These rules classify ships by their volume rather than mass, for reasons of tradition and since the use of the magneto-gravitic maneuver drive makes volume a more important design consideration than mass. Ship designs note vessel sizes in displacement tons: this is how many tons of liquid hydrogen the ship displaces. 1 displacement ton (d-ton or ton, for short) equals approximately 14 cubic meters: a cube roughly 2.4m per side. On a square grid map where each square is 1.5m per side and 3.0m high, each ton is represented by approximately two squares on the deck plan.

A note on tech levels: the default interstellar space-opera tech level in Cepheus Deluxe is TL12. Ships designed at lower or higher Tech Levels are possible.

Also note that these rules present interstellar-level spacecraft designs at TLs 9-16, which are ideal for space-opera campaigns. Societies at TLs 6-8 can also manufacture spacecraft for intra-system travel, but these are considerably more primitive than the interstellar-era craft one can create with these ship construction rules. For the sake of brevity, we will not describe primitive craft here.

Ship Design Checklist

1. Choose hull size.
   - Choose hull configuration.
   - Add armor, if desired.
2. Choose and calculate maneuver drive, jump drive, and power plant.
3. For jump-capable ships, determine fuel requirements.
4. Add bridge.
5. Choose electronics.
6. Optionally, add weaponry and shields.
7. Add additional components and carried craft.
8. Determine crew and passengers.
9. Add staterooms and cryotubes accordingly.
10. Allocate remaining space to cargo.
11. Calculate final cost and construction time.
12. Mass-produced ships enjoy a 10% discount.

SHIP HULL

Hulls cost MCr0.1 per ton. This is modified by the ship's configuration, as given below. The largest available starship hull in Cepheus Deluxe is 10000 tons.

Starships can be constructed at Class-A starports, system ships (which lack jump drives) and small craft (vessels under 100 tons) can be constructed at Class-A or Class-B starports. Use the following table to determine the construction time of a spacecraft.

CONSTRUCTION TIMES

SHIP TONNAGE	CONSTRUCTION TIME (WEEKS)
<100 tons	26
100 – 500 tons	52
501 – 1000 tons	78
1001 – 2000 tons	120
2001 – 3000 tons	150
3001 – 4000 tons	180
4001 – 5000 tons	210
5001 – 10000 tons	300

HULL CONFIGURATION

There are three general starship hull configurations:

Standard: The ship is robust enough to enter an atmosphere but will maneuver very poorly. It cannot fly like an aircraft but only land and take off into space again. The ship may skim gas giants for fuel. No additional cost is required. All Piloting skill checks when flying in an atmosphere suffer a DM-2.

Streamlined: The ship will operate and maneuver like an aircraft in an atmosphere. The ship may skim gas giants for fuel and comes equipped with Fuel Scoops at no extra cost. Streamlined hulls cost 10% more than the standard price (MCr0.11 per ton).

Distributed: The hull is designed with only space operations in mind. The ship is non-aerodynamic and will break up if it enters an atmosphere denser than Trace. It may not skim gas giants for fuel; ships with distributed hulls will often carry small craft to interface with worlds. The hull costs 10% less than the standard price (MCr0.09 per ton).

SHIP ARMOR

Ships armor is available as Light Armor and Heavy Armor. Armor affects the performance of anti-ship weapons and may even prevent damage completely from lighter weapons.

Ships of 1000 tons or more automatically increase armor by one increment: treat an unarmored 1000+ ton ship as having Light Armor, a lightly armored 1000+ ton ship as having Heavy Armor, and a heavily armored 1000+ ton ship as having Massive Armor (a category only available for such large ships).

LIGHT ARMOR

The following table lists how many tons of space Light Armor occupies and how much it costs by Tech Level.

HEAVY ARMOR

The following table lists how many tons of space Heavy Armor occupies and how much it costs by Tech Level.

STEALTH

Specialized emissions-masking systems and stealth structures can render a ship difficult to detect by sensors at any range. Stealth costs MCr0.1 per ton of the ship's hull. Stealth modifications provide DM-4 to any Computer throws to detect or lock onto the ship in and out of combat.

DRIVES

A system ship must have a maneuver drive (M-Drive) and a power plant (P-Plant). A starship must have a jump drive (J-Drive) and a power planet (P-Plant); a maneuver drive may also be installed but is not required. Small craft are too small to mount jump drives.

On the Drive Performance tables, the maneuver drive potential is the Thrust number (Tn), measured in the number of G's of acceleration available. For Jump Drives, the potential is the Jump number (Jn), or Jump range in parsecs. The power plant rating code must be at least equal to either the maneuver drive or Jump drive rating, whichever is higher.

Drives use a percentage of the ship's tonnage. Note that higher tech levels can produce more efficient drives.

Drive and power plant performance is not linear. Small and exceptionally large components tend to be less efficient than moderately sized units. This is especially true with small craft drives, which are significantly less efficient than those of starships (100+ tons).

Note that Performance of "0" represents station-keeping ability only, no tactical maneuvering. Often used by space stations and orbital facilities. Also note that while a space station might have Maneuver Drive 0, it must have at least Power Plant 1 to operate.

Drive Cost: Jump drive, Maneuver drive, and Power Plant components cost MCr1.5 per ton.

JUMP TECH TABLE

JUMP RATING	MINIMUM TECH LEVEL
1	9
2	11
3	12
4	13
5	14
6	15

LIGHT ARMOR

ARMOR TYPE	TL	TONNAGE	COST
Titanium Steel	7	12.5% of ship tonnage	12.5% of base hull cost
Composite Alloy	8	10% of ship tonnage	20% of base hull cost
Crystaliron	10	6.5% of ship tonnage	25% of base hull cost
Superdense	12	5% of ship tonnage	30% of base hull cost
Bonded Superdense	14	4% of ship tonnage	40% of base hull cost
Collapsed Superdense	16	3.5% of ship tonnage	50% of base hull cost

HEAVY ARMOR

ARMOR TYPE	TL	TONNAGE	COST
Titanium Steel	7	25% of ship tonnage	25% of base hull cost
Composite Alloy	8	20% of ship tonnage	40% of base hull cost
Crystaliron	10	13% of ship tonnage	50% of base hull cost
Superdense	12	10% of ship tonnage	60% of base hull cost
Bonded Superdense	14	8.5% of ship tonnage	80% of base hull cost
Collapsed Superdense	16	7% of ship tonnage	100% of base hull cost

SMALL CRAFT DRIVES (10–99-TON HULL) DRIVE PERFORMANCE (PERCENTAGE OF HULL TONNAGE)							
TYPE	0	1	2	3	4	5	6
Power Plant	-	4.5	7.8	11.4	15.0	18.9	23.1
M-Drive	1.5	2.7	4.5	6.6	9.0	11.7	14.7

SHIP DRIVES (100+ TON HULL) DRIVE PERFORMANCE (PERCENTAGE OF HULL TONNAGE)							
TYPE	0	1	2	3	4	5	6
Power Plant	-	1.5	2.6	3.8	5.0	6.3	7.7
M-Drive	0.5	0.9	1.5	2.2	3.0	3.9	4.9
J-Drive	-	3.0	4.5	6.5	9.0	12.0	15.5

TECH LEVEL ADJUSTMENT TO STARSHIP DRIVE TONNAGE								
	TL9	TL10	TL11	TL12	TL13	TL14	TL15	TL16
Multiplier	1.5	1.3	1.2	1.0	0.9	0.8	0.7	0.6

JUMP TECHNOLOGY

While all magneto-gravitic maneuver drives and fusion power plants are available from TL9 on, jump technology develops more gradually, as per the Jump Tech Table. Remember that the ship's computer also determines the ship's maximum jump rating.

FUEL

Fusion power plants include their own fuel, typically Helium-3. Power plant fuel suffices for over a year; annual maintenance costs include the expense of refueling the power plant. However, jump drives require liquid hydrogen fuel for each jump. When performing a jump, a starship uses 10% of its tonnage in fuel per parsec jumped. To determine how much fuel a given jump consumes, multiply the starship's tonnage by 0.1, and then multiply that number by the number of parsecs being traveled in the jump. For example, a 100-ton starship performing Jump 2 must expend 100 x 0.1 x 2 = 20 tons of fuel to operate its jump drive.

STARSHIP BRIDGE

Any ship of 100 tons or more has a bridge based on its total tonnage. The size of the bridge is 2% of the hull tonnage and costs MCr0.5 per 100 tons of ship. This tonnage also includes avionics and communication equipment, especially in larger ships. Minimum bridge tonnage is 10 tons for a starship and 5 tons on a system ship.

SMALL CRAFT COCKPIT AND ACCOMMODATIONS

A small craft control cabin or cockpit costs MCr0.1 per 20 tons of craft. A cockpit is cramped and will be uncomfortable for more than 12hours of continuous use. Apply a DM-1 to skill checks in those cases. A control cabin is far more comfortable for longer journeys.

SMALL CRAFT TABLE	
CONTROLS	TONNAGE
1-Person Cockpit	1.5 tons
2-Person Cockpit	3 tons
1-Person Control Cabin	3 tons
2-Person Control Cabin	6 tons

In addition, small craft may also mount acceleration couches, allowing them to carry passengers for short flights of 12 hours or less. These couches accommodate a single person each, displace 0.5 tons and cost Cr25000 (MCr0.025) per person. It is possible to install staterooms in small craft as well.

Note that small craft do not require additional electronics beyond the baseline model, though military and exploration craft greatly benefit from them

.For each extra person after the first two in a Control Cabin, add 2 tons and MCr0.05 (twice the cost of an acceleration couch because they also have some control capability). Only control cabins can have this added feature. Each cockpit or control cabin includes Acceleration Couches for each occupant.

ELECTRONICS

Each ship has a central computer and various electronic systems. The computer core itself is exceedingly small; even with hardening and redundancy, this mainframe is rarely larger than a small 21st century beer refrigerator. The actual tonnage includes various electronic systems: wiring, terminals, sensors, and communication systems.

Electronics are required for calculating interstellar jumps. The computer, included in an electronic system, grants a DM to sensor throws in and out of combat. The electronics may also assist in targeting, as noted in the Space Combat chapter.

All electronic systems are hardened against radiation and electromagnetic pulses, though this hardening is neither perfect nor complete; see the radiation attack rules in the Space Combat section.

Starships need at least Model/1 electronics for jump calculations. Small craft may have baseline computers with minimal electronics: this is included in their cockpit costs and tonnage. However, baseline electronics are recommended only for civilian craft.

You may add an "Advanced" (adv) option to any electronics system. It increases the electronics cost by 50% but also permits the ship to have a maximum Jump rating one higher than what it would attain with standard electronics. For example, Model/1adv electronics would have a Sensor DM-2, cost MCr1.5, and take up 1 ton of space on board, but would allow a maximum of Jump-2.

ARMAMENT

Military craft, and many civilian craft operating on the frontier, carry weaponry. Each weapon requires one or more hardpoints to mount on a ship. Ships have one hardpoint available per 100 tons of hull size. Fire control is included in the turret or bay tonnage amounts listed below.

Ship weapons have the following stats:

Weapon: weapon's name.

TL: minimum tech level to construct the weapon.

Type: the weapon's type, whether it is Light, Intermediate, Heavy, or a Main Gun.

Hits: the number of internal damage rolls the weapon inflicts on the appropriate damage table. Radiation damage rolls apply regardless of armor rating unless the ship is completely invulnerable to that weapon's class.

TURRETS

One turret may be attached to each hardpoint on the ship.

Single, **Double** and **Triple** turrets can hold one, two, or three weapons, respectively.

Pop-Up is a quality that can be applied to any type of turret. The turret is concealed in a pod or recessed on the hull and is detectable only when deployed. A ship with all its weapons in pop-up turrets looks unarmed to a casual sensor scan. Pop-up turrets take up twice as much tonnage as their normal counterparts and add MCr1 to the turret's cost.

Fixed Mounting weapons cannot move and are limited to firing in one direction: usually fixed forward, or fixed rear. Fixed mountings are found mainly on small craft. A fixed mounting costs half as much as a turret with the same number of weapons. See the Space Combat chapter for rules on how to fire Fixed weapons.

Turrets and fixed mounts can accommodate a variety of weapon systems. The legality and availability of a given weapon system is beyond the scope of these construction rules. The Referee should be the final arbiter of what is considered normal, legal, licensed, or illegal in their setting. Remember, the rules will not be same in every star system and starship crews must be careful to ensure they comply with local regulations.

SHIP ELECTRONICS TABLE

ELECTRONICS	TL	COST	TONNAGE	MAX. JUMP RATING	SENSOR DM
Baseline	-	-	-	-	DM-4
Model/1	7	MCr1	1	Jump-1	DM-2
Model/2	9	MCr3	2	Jump-2	DM+0
Model/3	11	MCr5	3	Jump-3	DM+1
Model/4	12	MCr10	5	Jump-4	DM+2
Model/5	13	MCr20	6	Jump-5	DM+2
Model/6	14	MCr40	8	Jump-6	DM+3
Model/7	15	MCr50	10	Jump-6	DM+4
Model/8	16	MCr100	12	Jump-6	DM+5

TURRET DISPLACEMENT AND COST TABLE			
WEAPON	TL	TONS	COST (MCR)
Single Turret	7	2	0.2
Double Turret	8	3	0.5
Triple Turret	9	4	1
Pop-Up Turret	10	x2	+1
Fixed Mounting	-	-	x0.5

TURRET WEAPONS TABLE					
WEAPON	TL	TYPE	HITS	COST	NOTES
Missile Rack	6	Light	1D per missile	MCr0.75	Nuclear missiles: Intermediate, 2D hits + 1 Radiation.
Pulse Laser	7	Light	2	MCr0.5	DM-2 to hit; superior point defense
Sandcaster	7	Special	Special	MCr0.25	
Particle Beam	8	Light	1 + 1 Radiation	MCr2	
Mining Laser	8	Light	1	MCr0.15	DM-3 to hit
Beam Laser	9	Light	1	MCr1	
Plasma Beam	12	Light	3	MCr3	
Fusion Beam	14	Intermediate	3 + 1 Radiation	MCr4	
Gravitic Lance	16	Intermediate	3	MCr5	

LARGE WEAPONS TABLE					
WEAPON	TL	TYPE	HITS	COST	NOTES
Laser Cannon	10	Intermediate	2	MCr5	
Torpedo Launcher	10	Intermediate	3D	MCr4	Launches five torpedoes
Particle Cannon	11	Intermediate	2 + 1 Radiation	MCr10	
Plasma Cannon	12	Intermediate	3 + 1 Radiation	MCr15	
Fusion Cannon	13	Intermediate	4 + 1 Radiation	MCr20	
Gravitic Lance	15	Intermediate	5	MCr25	
Meson Cannon	16	Heavy	5	MCr30	

BAY WEAPONS TABLE					
WEAPON	TL	TYPE	HITS	COST	NOTES
Mass Driver	8	Intermediate	2	MCr10	
Laser Cluster	8	Intermediate	2	Mcr20	
Torpedo Bay	6	Intermediate	3D per torpedo	MCr20	Fires 24 torpedoes
Particle Gun	9	Heavy	3 + 1 Radiation	MCr50	
Meson Gun	11	Heavy	4 + 1 Radiation	MCr150	
Fusion Gun	12	Heavy	4 + 1 Radiation	MCr100	
Gravitic Lance	15	Heavy	5	MCr125	
Cherenkov Cannon	16	Main Gun	5	MCr300	

MAIN GUN TABLE					
WEAPON	TL	TYPE	HITS	COST	NOTES
Particle Cannon	12	Main Gun	5 + 2 Radiation	MCr500	
Adv. Particle Cannon	14	Main Gun	5 + 2 Radiation	MCr1000	
Meson Cannon	12	Main Gun	5 + 2 Radiation	MCr1500	
Adv. Meson Cannon	14	Main Gun	5 + 2 Radiation	MCr3000	
Gravitic Disruptor	15	Main Gun	6	MCr1250	
Cherenkov Projector	16	Main Gun	8	MCr3000	
Gravitic Lance	15	Heavy	5	MCr125	
Cherenkov Cannon	16	Main Gun	5	MCr300	

SHIELDS TABLE				
Shield	TL	Effect	Tons	Cost (MCr)
Meson Shield	12	Protects against meson weapon damage, halving the number of hits inflicted by a meson weapon (rounded down). Meson shields prevent radiation damage from meson weapons.	50	60
Nuclear Damper	12	Halves fusion gun and nuclear missile hits (rounded down), removes automatic radiation hit from fusion and nuclear missile attacks.	50	50
Gravitic Field	13	Uses gravitic pulses to deflect incoming attacks, halving the hits from all weapons, but imposes a DM-1 on all outgoing attacks. At TL14, ignore the attack penalty.	100	100
Force Field	16	Ignores one attack, regardless of its power; this depletes the shield. Roll 1D on the following round. The Field regenerates on 4-6. Check each round until it regenerates.	200	300

In almost every case, nuclear weapons are restricted to military use only.

WEAPONS

Weapons may be installed in Turrets, Bays, or as Main Weapons. Not every weapon can be installed in all mounting systems at the same tech level, see the tables below for details.

Regular missiles cost Cr1200 each; smart missiles, Cr2500 each; nuclear missiles, Cr50000 each but are not normally available to civilians. **Smart missiles** are accurate, regardless of the gunner's skill. If they miss their target, they may make one more attempt to hit in the following round. **Nuclear missiles** are Intermediate weapons and cause 2D hits + 1 radiation hit. **Artillery** missiles attack ground targets and cost Cr5000 per missile. See the Space Combat chapter for missile attack procedures.

A single turret-mounted missile rack holds 3 missiles, and each ton of cargo space modified as a missile magazine can accommodate 12 missiles. Loading a rack from nearby ordinary cargo takes the gunner a full space combat round. A pre-designated missile magazine allows automatic loading but prevents that space from being used for cargo when not carrying missiles.

Pulse lasers are ideal for point defense against incoming missiles. They are powerful but inaccurate, causing 2 hits on impact, but attacking at DM-2 to hit ordinary targets. See the Space Combat chapter for rules on point defense.

Mining Lasers are a tool more than a weapon. Belters use these lasers to penetrate asteroids and reach valuable ores. Salvagers also use mining lasers to enter derelict ships or cut the ships up for parts. In a pinch, mining lasers can be used as a potent short-range weapon: they suffer DM-3 to all attack rolls when used as a weapon.

Sandcasters launch anti-laser sand canisters, described in the Ship Combat chapter. A single sandcaster holds 6 canisters and a single ton of cargo, or magazine, can hold 24 canisters. Sandcaster magazines can serve for sand canisters just as for missile magazines, and a single magazine can be used for both interchangeably, at an exchange rate of two canisters per missile.

Particle Beams blast enemies with beams of charged particles, causing both structural and radiation damage. This is the lightest military-grade energy weapon

available, and many polities restrict its use to military and paramilitary ships.

Beam Lasers are weak but accurate lasers firing continuous beams.

Plasma Beams: are powerful beam weapons firing ionized plasma.

Fusion Beams: beam weapons emitting plasma undergoing a fusion reaction.

Gravity lances fire shearing beams of gravitons which are exceedingly powerful, but attack rolls are affected by the hull configuration: Streamlined: DM-2, Distributed: DM+2.

Meson cannons fire streams of exotic particles that decay inside the hull of the target ship. They are notoriously inaccurate, but when they hit, they can cause tremendous damage. Meson cannons treat armor as one level lower but are affected by meson shields; they also suffer DM-2 to hit their target.

Cherenkov cannons fire a stream of particles that are moving faster than the speed of light in the local medium (tachyons) and can easily penetrate armor. Reduce target's armor rating by one category against this weapon.

Large Weapons

Large weapons are turret-mounted weapons, used almost exclusively by military ships. A single large weapon can fit in a triple turret and takes up all the turret's space. These larger weapons are designed to penetrate low armor values and are commonly found on escorts and frigates. Bay Weapons and Main Guns are available as large weapons.

Bays

A bay weapon is a massive, military-scale gun emplacement designed for large-scale naval warfare. Each bay displaces 50 tons and uses 5 hardpoints. The following bay weapons are available.

Main Guns

A large starship may carry massive, fixed-mounted, Main Guns in addition to its turrets and bays. A main gun displaces 1000 tons and requires ten hardpoints. There are three types of main guns, Particle Gun, Meson Gun, and Gravitic Disruptor. Note that the Meson Cannon and Gravitic Disruptor ignore armor.

Shields

Shields are defensive energy systems that protect against specific attacks. See the Shields Table for details.

Ship Crew

All vessels require a crew to operate and maintain the ship. A single person can run a 100-ton ship if they have the requisite skills, though a larger crew is advisable. Larger ships require larger crews.

Small Craft Crew

Each small craft requires a pilot, who can also fire the small craft's weapons. A dedicated gunner allows more complex gunnery actions, as given in the Space Combat chapter.

Ship Crews

Any ship requires a **pilot** to fly and steer the ship, as well as plot its course and calculate jumps. These tasks all require the Piloting skill. Military ships often have 3 pilots, working in four-to-eight-hour shifts for constant monitoring of the flight controls and sensors, when not in jump space.

Some civilian ships and all military ships have a **sensor operator**, using the Computer skill. On smaller civilian ships, the pilot often fulfills this role, though this limits the utility of sensors in emergency or combat. All military ships carry a sensor operator, and sometimes at least three of them to ensure round-the-clock sensor monitoring.

All ships require one **engineer** per 35 tons of drives and power plant. Ships with less than 35 tons of drives and power plant, as well as small craft, do not require dedicated engineers, as their drives are small enough for the Pilot to handle during flight. However, an Engineer may be beneficial in ship combat. Engineers need the Engineering and Repair skills.

Any ship carrying passengers requires one or more **stewards**. See the discussion of Stewards in the Ship Revenue section.

Larger ships must have a **medic** to tend to the health of passengers and crew. Even ships without passengers often carry a medic to maintain the crew's health and handle medical emergencies. There must be one medic per 50 crew and passengers carried, including low passengers. Dedicated medbays require additional medical staff.

Each gun turret requires a **gunner** to operate it. Weapon bays require two gunners, while main guns require ten gunners each. Each shield requires one gunner. Ships with Model/2 or better electronics may **automate** turrets: one turret per Sensor DM bonus (including DM+0) can be automated. For example, a ship with sensor bonus DM+2 could automate three turrets; the computer has a Gunnery-0 skill. Weapons bays, main guns, and screens cannot be automated. In

accordance with naval doctrine, most military craft prefer living gunners for all weapons and defenses.

Military ships often carry **marines**, as well as flight crew – one **pilot** and one **support crew** per small craft on board. Larger civilian ships often have a **purser** and **security staff** aboard as well. Note that small craft pilots and service personnel are **optional** – many civilian starships do not have such dedicated personnel for their small craft.

All ships have a **captain**, though on smaller ships this is usually a part-time job performed by the pilot in addition to their regular duties. A dedicated captain is ideal for combat vessels and all-but-required on all military vessels.

ACCOMMODATIONS

The standard accommodations for ship crews are one stateroom per crew member. A **stateroom** displaces 4 tons and costs MCr0.5.

Military ships and more rugged freighters often institute a policy of **double occupancy**: housing two crew members or passengers in each stateroom. This does not increase the stateroom cost but is quite cramped. Highly skilled or senior civilian crew members and military officers usually get their own staterooms. Double occupancy for all crew except for the bridge crew or even for just the captain is standard practice on smaller military ships.

High and **Middle Passage** passengers require their own staterooms. Steerage class passengers always travel in double occupancy, unless the ship takes off with an odd number of Steerage class passengers, in which case the captain will organize a draw and one Steerage class passenger will have their own stateroom at no additional cost.

Cryotubes carry Low Passage passengers in cold sleep. Cyrotubes also serve as emergency transport and for carrying prisoners or captured lifeforms. A cryotube displaces 0.5 tons and costs MCr0.05.

Emergency cryotubes carry four persons each, who all share the same risky revival throw as noted in the Passage Section. They serve in emergencies, as well as for transporting large livestock. Most polities forbid carrying passengers in emergency cryotubes in non-emergency situations. Each displaces 1 ton and costs MCr0.1

Additional **acceleration couches** can be installed for short trips in small craft, or starships. Each couch costs MCr0.025 and takes 0.5 tons of space.

Each ship is built with one standard **airlock** per 100 tons as part of the hull at no additional cost. Small craft do not come with airlocks standard. Additional airlocks are 1 ton and cost MCr0.2 each.

Military ships often carry an **armory**, providing military-grade small arms, armor, and equipment. Each 2-ton block of armory costs MCr0.5 and equips 10 marines.

A ship may use a **breaching tube** to breach and board a disabled enemy ship, that is, an enemy ship without an operable Maneuver Drive. A breaching tube takes up 3 tons of space and costs MCr3.

ADDITIONAL COMPONENTS TABLE

COMPONENT	TONNAGE	COST (MCR)
Acceleration Couch	0.5	0.025
Airlock, Additional	1	0.2
Armory (per 10 marines)	2	0.5
Breaching tube	3	3
Fuel processors (per 5 tons of fuel/day)	1	0.1
Fuel scoops	-	1
Galley	Included	Included
Medbay	Included	Included
Medlab (dedicated; per 2 patients)	8	16
Laboratory	4	4
Ship's locker	Included	Included
Small craft or vehicles	craft tonnage	As the small craft
Escape pod (per person)	0.5	0.1
Mining Equipment	10	2
Probe drones (per 5 drones)	1	0.2
Repair drones	1% of hull	0.5/ton

Fuel processors can refine unrefined fuel into refined fuel. A ton of fuel processing equipment can refine 5 tons of liquid hydrogen per day. Processors cost MCr0.1 per ton.

All streamlined ship hulls have built-in **fuel scoops** for collecting hydrogen fuel from gas giants. For ships with standard hulls, installing fuel scoops cost MCr1 and do not displace any tonnage.

Every ship has a **galley** (kitchen and lounge) and a **medbay**. These are included in stateroom tonnage and costs. A medbay counts as a medical facility for the purposes of healing wounds. A basic medbay accommodates up to 2 patients. A dedicated medlab, costing MCr2 and displacing 8 tons, represents better, hospital-grade care. Medlabs grant DM+1 to all Medicine tasks and allow doctors to perform Trauma Surgery without penalties for working in the field. Each additional 2 tons and MCr0.5 allocated allows another patient. Medlabs require one medic per 4 patients.

A **laboratory** is useful for scientific research, and comes in 4-ton blocks, each costing MCr1. A laboratory provides DM+1 to Science throws by the scientist using it. At the Referee's discretion, a laboratory is required for advanced or obscure scientific investigation.

Every ship includes a **ship's locker**, which contains various technical and survival supplies, space suits,

CARRIED VEHICLES TABLE

VEHICLE	COST	TONNAGE
4x4 Utility Vehicle	MCr0.04	4
Armored Personnel Carrier	MCr0.06	8
Bus	MCr0.035	12
Exploration Vehicle	MCr0.5	16
Ground Car	MCr0.006	3
Pick-Up Truck	MCr0.01	6
Tank	MCr0.3	20
Tripod	MCr3	24 (Folded)
Truck	MCr0.05	20
Walker	MCr0.5	8
Motorboat	MCr0.02	6
Patrol Boat	MCr0.1	30
Steamship	MCr0.72	50
Submersible	MCr1.7	100
Biplane	MCr0.02	8
Bomber	MCr1	30
Fighter, Propellor	MCr0.5	12
Fighter, Jet	MCr10	10
Helicopter	MCr0.25	8
Jet Liner	MCr5	60
Jump Jet	MCr0.5	20
Aircar	MCr0.15	4
Grav Barge	MCr0.5	16
Grav Carrier	MCr1	10
Grav Disc	MCr0.11	6
Grav Gunship	MCr2	16
Grav Liner	MCr10	80
Grav Orb	MCr0.02	2
Grav Skiff	MCr0.1	4
Speeder	MCr0.9	8

and civilian small arms such as pistols and shotguns. We recommend that the Referee determine the exact contents of the ship's locker only when the players wish to access it. In any case, access to the ship's locker is usually controlled by biometric lock, keyed to the captain or other senior crew.

Ships may carry **small craft** and **vehicles**. The space allocated for a small craft or vehicle does not include space for spare parts or other maintenance equipment. All spares and equipment must be carried as cargo.

Most starships carry **escape pods**, which displace 0.5 tons and cost MCr0.1 per passenger or crew.

Mining Equipment, displace 10 tons and cost MCr2 per drone bay, and allow a ship to mine asteroids. Each bay of mining equipment includes the mining drones and machinery to process 1Dx10 tons of asteroid per working day. The tonnage allocated also includes ore handling machinery, allowing the ship to take on ore and transfer it to the cargo bay.

Probe drones, displacing 1 ton and costing MCr0.2 per 5 drones, are designed for planetary surveying. The ship drops them from orbit in disposable re-entry capsules; they must be recovered manually. Alternatively, a probe drone in orbit can serve as a survey and communication satellite.

Repair drones displace 1% of the ship's hull and cost MCr0.5 per ton of drones. The complement of drones allows the ship to make one free repair attempt per space combat round. The drones have Repair 1 and Engineering 1 and can only perform or assist the Damage Control action. See the Space Combat chapter. Cost includes software.

Carried Vehicles

Starships may carry regular vehicles on board. The Carried Vehicles Table lists various transportable vehicles, their cost, and their size in ship tons. The tonnage listed includes space for access and basic maintenance equipment. Parts for maintenance need to be stored separately.

Cargo and Final Cost

The designer can now allocate any remaining tonnage to the ship's cargo bay.

Add up the cost of various components for the ship's final cost. Mass-produced ships enjoy a 10% discount to the final cost.

The question whether a ship is mass-produced is left to the Referee. Custom ships designed by players should not be mass-produced, as compared to standard models pre-designed by the Referee.

Starship Design Example

Aaron is a Referee is looking for an interesting ship to give to his players since one of them, Jenny, rolled a Free Trader four times. This means that the player characters have a 40-year-old rust bucket of a trader with ten years of mortgage payments remaining. However, Aaron has a more interesting idea in mind: what if, in lieu of the trader, Jenny's character gets an old, decommissioned military transport? Unfortunately, after perusing the Common Space Craft chapter, he can't quite find a suitable ship. After cursing the overworked and underpaid Stellagama writers for such a glaring oversight, he decides to make one himself.

First, Aaron needs a concept for the ship. This would be an old light military transport. Not a warship by any means, but a light freighter used to fill holes in the wartime logistics networks and perform light transport duties. It wasn't intended for front-line space-combat duty but could defend itself when needed. This means something tougher than a trader, even if it falls within the typical trader-merchant tonnage range. Now that the war is over, the military has no need for so many old light transports. They decommission them, and then sell them on the open market. Jenny's character managed to get her hands on one through an old military contact. The ship's tech level is at the lower end of wartime military tech, as these ships were designed to be repaired anywhere, even on low-tech backwaters; therefore, Aaron puts the design at TL11.

A 300-ton hull will suffice: this is a light ship, after all, but not a fully-fledged bulk freighter. A 300-ton hull costs MCr30, but Aaron wants a ship that can go anywhere – a streamlined ship – so this increases the hull cost by 10%, putting it at MCr33. Since this is a ship that took enemy fire, like when landing at a hot LZ, armor is prudent; Light armor composed of TL10 Crystaliron will do the trick. This requires 6.5% of ship tonnage (19.5 tons) and costs 25% of the hull's cost (which is MCr33), that is MCr8.25.

Now, on to the engineering compartment. This Light Military Transport does not need high speeds, but it does need reasonably good legs; this means 2-G acceleration and Jump-2 capability. Aaron cross-references these performances on the Ship Drives table. He determines that he needs 4.5% of the ship's tonnage for the Jump Drive (13.5 tons) modified by TL for 1.2 for a total size of 16.2 tons, at a cost of MCr2.5 per ton, for a total cost of MCr40.5. The Maneuver Drive is 1.5% of the hull (4.5 tons) modified by 1.1 for TL11: the M-drive's total size is 5.0 tons, at a cost of MCr2.5 per ton (total MCr12.4). The Power Plant must be rated at 2, which requires 2.6% of the hull modified by 1.5 for

TL11 300-TON LIGHT MILITARY TRANSPORT DESIGN SHEET			
COMPONENT	NOTES	TONNAGE	COST (MCR)
Hull	Streamlined, construction time 52 weeks		33.0
Armor	Light Crystaliron	19.5	8.25
Maneuver Drive	2-G acceleration	5.0	12.38
Power Plant	Rating 2	11.7	29.25
Jump Drive	Jump-2	16.2	40.5
Fuel	1 Jump-2	60	0
Bridge		10	1.5
Electronics	Model/3, DM+1	3	5.0
Armament	Hardpoint #1: triple pulse laser turret	4	2.5
	Hardpoint #2: triple sandcaster turret	4	1.75
	Hardpoint #3: (empty)	4	1.0
Other components	Magazine: 24 sand canisters	1	0
	20 Escape Pods	10	2.0
	6 tons fuel processers; 30 tons/day	6	0.6
Accommodations	10 staterooms	40	5.0
	20 Low Berths	10	2.0
Cargo		95.6	0
Crew: 7	Pilot/Captain, Sensor Ops, Engineer, Medic, 3x Gunners		
Total before discount		300	143.725
Total after discount	10% mass-production discount	300	129.353

TL11 (11.7 tons) at a cost of MCr2.5 per ton (MCr29.25). If the drives could be upgraded to TL12, the ship would gain 7.1 tons of additional cargo space. Aaron jots this down as a suggested player goal and adventure idea. Now, the engines need fuel. For a single Jump-2 capability, the ship needs 20% of its tonnage in liquid hydrogen fuel to form the jump bubble. That means 60 tons of jump fuel.

The ship needs a bridge. At 300 tons, the base 2% bridge displaces 6 tons, but starships have a 10-ton minimum. The bridge costs MCr0.5 per 100 tons of ship, so MCr1.5 for a 300-ton ship. Adjacent to the bridge is a computer and its associated electronics. Jump-2 capability requires a minimum Model/2 computer, but Aaron wants reasonable sensor capabilities; he chooses a Model/3 Computer, costing MCr3 and displacing 3 tons of electronics and providing a DM+1 to sensor checks.

On to the fun part – guns! As Aaron noted, this isn't a warship, so there is no need for heavy weapons, but a bunch of lasers and some defensive sandcasters will provide some protection in times of need. This is especially important as Aaron plans to introduce some pirates as the primary antagonists in his campaign, so the group will need some lasers to blast at them! He chooses to install three triple turrets. Each triple turret requires four tons, for 12 tons in total. Triple turrets cost MCr1 each themselves. One turret will have 3 pulse lasers – inaccurate but powerful and great for point-defense fire; each costing another MCr0.5, so, together with the turret, MCr2.5. The second turret will carry 3 sandcasters, each costing MCr0.25. Together with the turret, this amounts to MCr1.75. Aaron decides that a military transport would have likely carried one more powerful weapon in the third triple turret. However, since the ship was decommissioned, the military scrappers removed the particle cannon (a Large weapon). The now-empty triple turret remains, for a cost of MCr1.

Now is a good time to determine the ship's crew, as it affects the number of accommodations and other components. The ship needs a Pilot, who, due to its small size, is also the Captain; it requires a Sensor Operator and a Medic; its 25.8 tons of engines do not actually require an Engineer, but Aaron puts one in anyways. The three turrets require a gunner each, though only two are required after decommissioning. In total, this ship has seven crew members normally, but six suffice for the decommissioned version.

It would have been simplest to install seven staterooms to accommodate this crew. However, it would be handy to be able to carry some occasional

passengers, such as military officers needing transport and unable to get an available berth on a larger troop transport. Aaron installs 10 staterooms instead, as well as 20 Low Berths for additional operational flexibility. Aaron crams the crew (except for the Pilot/Captain) into double occupancy, providing six available staterooms for passengers. However, when carrying passengers, the ship will require an added Steward, potentially forcing the Pilot/Captain to share their stateroom with another crewmember. The staterooms each displace 4 tons and cost MCr0.5 each, for a total of 40 tons and MCr5. The low berths each displace 0.5 tons and cost MCr0.1, for a total of 10 tons and MCr2.

Finally, Aaron installs other components. Aaron installs a 1-ton magazine for the sandcaster, which holds 24 sand canisters. That doesn't cost Credits, only space. He also adds 20 escape pods, to supply a measure of safety to all occupants even when all staterooms are in double occupancy; this displaces 0.5 tons per escape pods, for a total of 10 tons, and costs MCr0.1 per escape pod, for a total of MCr2. As a frontier vessel, the Light Military Transport can benefit from fuel processors for frontier refueling; Aaron installs 6 tons of fuel processors at MCr0.1 per ton, for a total MCr0.6. The fuel processors can refine 30 tons a day – it will take 2 days to fill the entire fuel tank from unrefined or skimmed fuel.

There are 95.6 tons remaining out of the Transport's 300, so Aaron designates them as cargo space.

Now it is time to sum up the costs. The Light Military Transport costs MCr142.725; however, Aaron decides that it was mass-produced during the War, so it enjoys a 10% mass-production discount, for a final price tag of MCr129.353. For a final ship price, it is customary to round the price to the nearest whole number, which is MCr129. The 40-year mortgage, of which ten years remains, will cost MCr0.404227 per month (Cr404227 per month). The ship's yearly maintenance cost is 0.1% of the total cost, so Cr129353 per year (10779/month). Life support costs are Cr2000 per person, per month, which totals to Cr20000 per month, though bulk purchasing of life support supplies can reduce this cost. The total operating expenses, not counting jump fuel and crew salaries amount to Cr570061 per month.

A fine ship for frontier adventuring!

Its compact stat block will look like this:

LIGHT MILITARY TRANPORT

Light Military Transport; Tonnage: 300; Armor: Light Crystaliron; Streamlined; Maneuver: 2-G; Jump Rating: 2; P-Plant: Rating 2; Fuel: 60 tons 1xJump2; Computer: Model/3; Armament: 3x triple turrets: 3x pulse lasers, 3x sandcasters, (empty); Fittings: 20 escape pods, 10 staterooms, 20 low berths, 95.6 tons cargo; Crew: 7 total – pilot, sensor operator, engineer, medic, 3 gunners (2 gunners when decommissioned); Cost: MCr129; Construction Time: 52 weeks

The decommissioned military transport is a common interstellar merchant vessel in a post-war era.

SPACE COMBAT

The spacelanes can be dangerous. Pirates lurk near gas giants and jump points. Vessels belonging to enemy interstellar polities might raid a system and prey on the player characters' ship. The player characters might decide to engage in some piracy themselves, or they may be the crew of a patrol frigate that has found some pirates or raiders. Use the following rules to run the combat action on such occasions.

SPACE COMBAT BASICS

Ships typically fight at a range of several thousand, or tens of thousands, kilometers. However, *Cepheus Deluxe* abstracts ranges in ship combat. There is no need to track ranges, though creative Referees and players might describe their maneuverings and tactics in terms of range.

Space combat typically occurs in 6-minute **rounds**. This time accounts for weapon recharge cycles and long-range missile travel, as well as emergency repairs. Since range is abstracted using the Position mechanic (below), it is possible to run space combats at different time frames. This allows for furious dogfights between fighters, intense chases as smugglers attempt to run blockades, as well as nail-bitingly slow cat-and-mouse actions between pirates and patrol frigates, all using the same basic rules.

However long a round is in space combat, in each round every crew member may take one **action**, as detailed below. This means that crew members staffing two posts – such as a pilot also serving as a captain – must choose only one post they are filling in each round. This is the main reason most larger ships, and all military vessels, have dedicated captains and specialized personnel for each crew position. A character may occupy two positions at once, but in each given round, they may only act in one position. For example, smaller civilian starships often have the pilot double as the captain. In such cases, the character must choose every round if they take a piloting action or a captain's command action.

COMBAT PROCEDURE AND POSITION

Step 1: Before combat begins, the Referee should already have determined if the opposing forces have detected each other in the same region. See "Detecting Other Vessels" in the Ship Operations chapter. For groups of ships, each group should throw Computers/INT once, using the best Sensor DM and Computer skill available in the group. If both sides of a combat are aware of each other, skip to step 3.

Step 2: Determine Surprise. Space is very empty, and fusion powered starships are impossible to conceal at combat ranges. However, It is possible to catch an enemy ship unprepared, if not completely by surprise. If one ship has not been detected but has the enemy on its screens, then it may attempt to ambush the enemy. Both sensor operators should throw Opposed Computer/INT, modified by their ships' respective Sensor DMs, stealth fittings, and any situational modifiers the Referee wishes to add to each throw. If the ambushing ship succeeds in the opposed test with Effect 1 (ties go to the defender), it has caught the defender unprepared and may roll Position (step 3, below) normally. The Defender has a Position of 0 for the first round of combat. The Defender can still act, but only at great disadvantage. In the second and subsequent rounds, all ships roll Position normally. If the ambushing ship loses the opposed Computer/INT throw, then it has been detected: both ships roll Position normally.

Step 3: Roll Position. There is no initiative or range to track in space combat. Each space combat round, all participating ships' pilots throw 1D + Piloting skill + DEX DM + their ship's current maneuver drive thrust number. The attribute DM used in space combat is usually DEX, but in some circumstances the Referee might call for INT or EDU DMs to be used instead.

POSITION ATTACK DM TABLE

ATTACKER IS	DM TO ATTACK THROWS
Inferior Position with Main Guns or Fixed Mounts	No attack possible
Inferior Position with Turrets	DM-3
Inferior Position with Main Guns or Fixed Mounts and successful Attack Vector action	DM-3
In the same Position as the target	DM-2
1 or 2 Positions higher than the target	DM-1
3 or 4 Positions higher than the target	DM 0
5 or more Positions higher than the target	DM+1

The result of the 1D + Attribute DM + Piloting Skill + Maneuver Drive Thrust number is called the Position.

The ships in a space battle can only attack those targets in equal or lower Position to themselves, without restrictions. A ship with better Position may choose when to take its turn – before or after its opponents. All characters on a ship act on its turn. They can attack with any weapon on board their vessel, using the following modifiers based on the relative Position between attacker and target.

Ships with lower Positions suffer DM-3 to attack anyone with a higher Position number than them, in a given round. This penalty applies to turrets and bays. Weapons in fixed mounts or Main Guns cannot attack without Position. However, a successful Attack Vector Pilot action will allow for ships with fixed mounts or Main Guns to attack, albeit at DM-3. Note that two vessels that have the same result for their Position throw can still attack each other with all weapons, but with DM-2 to their attack throws.

Vessels with disabled Maneuver drives automatically lose Position. Note that space stations with a thrust of 0 roll Position normally. They simply do not have a bonus from maneuver drives. Instead of Piloting, station commanders throw 1D + Tactics + INT DM for Position. It is difficult, but not impossible, to stay in the blind spot of a station-mounted turret.

It is possible to have multiple ships engaged in combat. Simply record the different Position results in descending order. The ships higher on the "Position ladder" have better Position on any ship below them.

ACTIONS

Each character may act once in each combat round. There are five positions aboard a ship: Captain, Pilot, Sensor Operator, Gunner, and Engineer, each with its own actions. Usually, there may be only one character performing an action at a given station, with the exception of Gunners: there is one gunner per turret, bay, or main weapon on a ship. Some stations allow multiple crewmembers to perform certain actions; we note this in the action description. Otherwise, characters can assist one of the positions in performing their actions below, according to the rule for collaborating on skill throws found in the Basic Rules chapter.

CAPTAIN ACTIONS

The ship's captain may engage in one of the following actions:

Lead Crew: throw Leadership/INT 8+. If successful, gain a pool of positive DM points equal to the Effect (minimum 1) that the captain may distribute as they see fit for the next round. For example, a roll of 12 generates a pool of 4 points, which can be given to one crewmember for a DM+4, or to four separate crewmembers, for a DM+1 each.

Outmaneuver: the captain throws Tactics/INT 10+. If successful, apply a DM+2 to the ship's next round's Position throw.

PILOT ACTIONS

The pilot may take one of the following actions, in addition to the free Position throw they make at the start of each round.

Attack Vector: the pilot may throw Piloting/DEX 8+ and apply the Effect to a single weapon's attack throws for the round (Effect 0 gives DM+1 to one weapon). This throw is not modified by the ship's thrust rating. If the Effect of the throw is 2 or greater, the pilot may distribute the Effect "points" as positive DMs to various weapons. Alternatively, if the ship does not have Position, this action allows firing fixed weapons or Main Guns at the enemy, albeit at DM-3 to hit. In this case, no positive DMs can be distributed to fixed guns.

Dock: Docking is only possible with a friendly ship, or with an enemy ship without a functional maneuver drive. You may not dock with an actively maneuvering enemy ship.

Disengage: To disengage from ship combat, a ship can use their Pilot action that round to throw a Piloting/DEX opposed skill throw vs. the pursuer's Piloting/DEX, adding each ship's thrust rating to their respective throws. Whoever has Position gains Advantage on the roll for that round. The quarry escapes immediately if it wins the opposed throw. In a situation where a ship is attempting to escape multiple targets, use the Pilot skill and thrust rating from the fastest ship of the pursuing side against the lowest thrust rating of the target. Alternatively, a jump-capable ship may jump out of combat, as described below.

Evasive Maneuvers: the pilot throws Piloting/DEX 12+, modified by the ship's available maneuver drive thrust rating. On a success, apply a negative DM equal to the Pilot's skill (to a maximum of DM-3) to all incoming attacks. This does not require Position and lasts until the start of the ship's next turn.

Plot Jump: Plotting a jump requires the pilot's attention for 6 – (Pilot Skill) space combat rounds. As well, the pilot must succeed at a Piloting/EDU 6+ throw, with a negative DM equal to the distance in parsecs. It is also possible to plot a jump in one round, but this raises the difficulty to Piloting/EDU 10+. A failed throw means that the jump must be plotted again. Anyone with the Pilot skill can perform the Plot Jump action, freeing up the pilot for other actions.

Emergency Jump: throw Piloting/INT 6+ to initiate an emergency jump while under fire; if successful, the ship's engineer must throw Engineering/INT 8+ to power the jump. Failures may be re-rolled in the next round. See the Ship Operations chapter above for the jump procedure itself. Note this applies DM-2 to the

Jump Throw, increasing the chance of misjump. This requires a jump plot, as noted above – either prepared beforehand or generated during combat. Anyone with the Pilot skill can perform an Emergency Jump action, in addition to whatever the pilot is doing in the round.

Sensor Operator Actions

The ship's sensor operator may act as follows:

Spoof Missiles: Electronic warfare can defeat incoming missiles; throw Computer/INT 8+ to spoof an incoming missile due to impact that round, or the next round. The sensor operator must roll to successfully spoof each missile. Multiple missiles may be spoofed each round up to the Sensor Operators Computer skill (minimum of 1 attempt).

Jam Sensors: Electronic warfare can provide "cover" to a ship. Roll Opposed Computer/EDU against one enemy vessel, modified by the ships' Computer DMs. If successful, the target of the Jamming suffers a negative DM to any attack roll made against the jamming ship. The negative DM is equal to the skill level of the Sensor Operator. This action is cumulative with a pilot's Evasive Maneuver action.

Scan: throw Computer/EDU 8+ to detect vessels and other objects; this throw is modified by the ship's sensor DM and by the target's stealth, if any.

Target Systems: throw Computer/EDU 10+, modified by the ship's Electronics DM. If successful, a single gunner may choose to target a specific system on the enemy ship with one attack. If that gunner's next attack is successful and does damage, they may select which system the attack has hit.

Sensor Lock: throw Computer/INT 8+, modified by the ship's Electronics DM. As well, apply a negative DM equal to the target ship's Electronics DM (DM+0 and lower do not count). If successful, all attacks against the locked ship gain a DM+1. The sensor lock lasts until the ship attempts to lock onto another target, or it is broken by the target.

Break Sensor Lock: throw Computer/INT 10+, modified by the ship's Electronics DM. As well, apply a negative DM equal to the attacker's ship Electronics DM (DM+0 and lower do not count). If successful, the existing Sensor Lock is broken.

Gunner Actions

Each gunner may take one of the following actions. Note that a gunner in a turret may fire all the weapons in that turret using different actions, once per round. For example, a gunner in a turret with a Beam Laser, a Pulse Laser, and a Missile Rack may fire the Beam Laser, launch a missile, and engage in point defense with the Pulse laser.

Fire Energy Weapons: throw Gunnery/DEX 8+ to hit a target with an energy weapon such as a laser, particle beam, meson gun, or fusion gun in their turret. For bays and main guns, the Chief Gunner of each such weapon makes a Gunnery/INT 8+ throw to hit the target.

Launch Missiles: the gunner launches one missile per rack in the turret. A missile cluster fires a salvo of five missiles, while a missile bank fires a salvo of 12 missiles. Throw Gunnery/INT 8+ before launch to lock the missiles on their target. Failure to lock prevents launching but keeps the missiles ready for launch in the future. If a Sensor Lock exists on the target (see Sensor Operator actions, above), no missile lock throw is required.

Ordinance (missiles and torpedoes) ignore Position modifiers to hit but are vulnerable to point-defense fire and electronic warfare spoofing. Missiles will hit their target at the end of the next round after their launch, allowing the targeting ship to attack missiles with point-defense and spoofing, if desired. On the round that the missiles reach their target, throw 4+ to hit the target, unmodified by any skill. The Evasive Maneuvers Pilot action affects this missile attack throw. Smart missiles that miss the first round may retry this throw once in the following round, after which they are no longer viable.

Point Defense: any energy weapon can perform point defense fire against incoming missiles, though pulse lasers are the most effective for this task. Throw Gunnery/DEX 10+ to destroy an incoming missile, with DM+2 if using a pulse laser. The gunner may make multiple point defense attacks with the same turret weapon in the same action, but each attack after the first suffers from a cumulative DM-1, so the third shot, for example, will suffer DM-2 to hit the missile. Using this basic rule, throw against each incoming missile, but note that unlike regular attacks, here the gunner may try to gun down multiple missiles per combat round, with the penalty noted above. If a turret has multiple energy weapons in a turret being used for Point Defense, each weapon is rolled for separately – negative DMs for multiple attacks to not transfer between weapons. However, all weapons in a given turret must be used for point defense against missiles coming from the same enemy ship.

Launch Sand: the gunner may launch sand canisters to serve as a defensive screen. Throw Gunner/DEX 6+ to apply a DM-1 to all weapons and sensor locks from a single ship for one round. Multiple canisters stack their DM to a maximum of DM-3. Canisters last for one round, until the ship's next turn.

Note: each weapon in a double or triple turret has its own attack throw. However, energy weapons mounted in the same turret may only attack the same target. The gunner may launch missiles at any desired target. Also

note that weapons mounted on a fixed mount cannot be used to attack unless the vessel has Position. Each weapon within a given turret can only shoot once per combat round, except when used for point defense. A gunner may fire all or some of the weapons in the same turret at the same round. In a triple turret, a gunner can fire all three weapons every turn.

Finally, note that, for the sake of simplicity, a missile rack, or torpedo launcher or torpedo bay must fire all its missiles against a single target each round.

Optional Rule: Streamlined Turret Fire

To reduce the amount of die rolls in ship combat, we recommend that for ships with more than 3 turrets, each double or triple turret should carry the same type of weapons. This allows all weapons to share the same attack throw but attacking at DM+1 for a double turret or at DM+2 for a triple turret. Damage is for one weapon only—we abstract the other weapons' contributions as increasing the chances of scoring a hit. Under this optional rule, all weapons in such a turret must attack the same target. If launching missiles, all missiles in the same turret share a single locking throw but hit their target individually. We recommend that when using the streamlined turret fire rules, you should also use the streamlined point defense rules (see below) for the sake of simplicity.

Streamlined Defense for Ships up to 999 Tons

Weapons	DM to Incoming Missiles
1	-1
2-4	-2
5-7	-3
8-9	-4

Optional Rule: Streamlined Point Defense for Ships up to 999 Tons

In large battles involving large numbers of missiles and lasers, attacking each missile individually by point defense fire is quite impractical. To simplify such combat, use the following rule. At the beginning of each round, the defender decides how many, if any, energy weapons are dedicated to point defense. This applies a negative DM to all incoming missiles' hit throws, per the following table. Sand Canisters also apply a DM-1 similar to laser point defense.

Optional Rule: Streamlined Point Defense for Ships of 1000+ Tons

To resolve streamlined point defense for ships of 1000-10000 tons, use the following table of laser turrets and sand canisters vs. missiles. The attacker makes a single attack throw, Gunnery/INT 8+, without modifiers; if successful, at least some of the missiles hit their target. Then consult the following table to find how many hits were caused by the missiles that penetrated the target's defensive laser fire. Results marked with a dash ("- ") means that no hits are possible even with a successful attack throw. The left-most vertical column in the number of laser turrets; the top horizonal row is the number of inbound missiles.

The table assumed unarmored, 1000+ tons, starships, which are always rated at Light Armor. For ships rated at Heavy Armor (i.e., Lightly Armored large ships), consider the number of lasers being two steps better; nuclear weapons ignore this. Non-nuclear missiles are ineffective vs. Heavy Armor and nuclear missiles suffer from the number of lasers being two steps better. Both conventional and nuclear missiles are ineffective against Massive Armor.

Engineer Actions

Any character with the Engineering skill can perform Damage Control – emergency repairs of damaged systems and breaches. Multiple characters with this skill may perform damage control at the same time, each on a different system, in addition to other Engineer actions in the round. Throw Engineering/INT 8+ to repair a damaged system or to jury-rig a single disabled system back into operation. Success temporarily repairs one hit on the system. The damage will reappear in 1D hours. Note: destroyed systems cannot be repaired or jury-rigged during combat.

Characters without the Engineering skill but with the Repair skill may assist an engineer in damage control, using the Aid Other rules in the Basic Game Mechanics chapter.

Repair drones can make one damage control check per combat round.

Overcharge Weapon: the engineer can disable the safeties on an energy weapon for extra damage. Throw Engineering/EDU 8+ to boost a single energy turret's Hits rating by +1, including all energy weapons mounted on said turret.

Redline Engines: the ship's chief engineer throws Engineering/EDU 8+. On a success, the ship's thrust rating increases by 1 for next round (including the Position throw).

SHIP PENETRATION MATRIX TABLE

WEAPON/ARMOR	UNARMORED	LIGHT	HEAVY	MASSIVE
LIGHT	Internal	Surface	Undamaged	Undamaged
INTERMEDIATE	Critical	Internal	Surface	Undamaged
HEAVY	Destroyed	Critical	Internal	Surface
MAIN GUN	Destroyed	Destroyed	Critical	Internal

SURFACE HITS TABLE

2D	SURFACE COMPONENTS
2-6	No damage – attack bounces off
7-8	Breach
9-10	Weapon
11	Electronics
12	Internal Hit

RADIATION HITS TABLE

2D	RADIATION DAMAGE
2-5	No damage – radiation absorbed by hull
6-7	Sensors
8-9	Electronics
10-11	Crew
12	Critical

INTERNAL HITS TABLE

2D	STARSHIP COMPONENTS	SMALL CRAFT COMPONENTS
2	Power Plant	Sensors
3	Hold	Power Plant
4	J-Drive	Hold
5	Weapons	M-Drive
6	M-Drive	Crew
7	Breach	M-Drive
8	Fuel	Armor
9	Crew	Weapons
10	Sensors	Breach
11	Bridge	Cockpit
12	Critical	Critical

MISSILE VS LASER TURRET HITS
NO. OF LASER TURRETS/SAND/NO. OF MISSILES

10-20	21-30	31-40	41-50	51-60	61-80	81+	
10-20	1D	2D	3D	1 Critical	1D Critical	Destroyed!	Destroyed!
21-30	1D	2D	2D	3D	1 Critical	Destroyed!	Destroyed!
31-40	1	1D	1D	2D	3D	1 Critical	1D Critical
41-50	-	1	1	1D	2D	3D	1 Critical
51-60	-	-	1	1	1D	2D	3D
61-80	-	-	-	1	1	1D	2D
81+	-	-	-	-	1	1	1D

CRITICAL HITS TABLE		
1D	STARSHIP CRITICAL HIT	SMALL CRAFT CRITICAL HIT
1	Power Plant Destroyed	M-Drive Destroyed
2	M-Drive Destroyed	M-Drive Destroyed
3	Jump Drive Destroyed	Power Plant Destroyed
4	Critical Crew Hit	Critical Crew Hit
5	Electronics Destroyed	Electronics Destroyed
6	Ship Destroyed	Ship Destroyed

WEAPON HIT TABLE	
2D	LOCATION
2-9	Turret hit
10-11	Bay hit
12	Main gun hit
If there are no bays or main guns, disable turret weapons instead. *Multiple hits on the same weapon (not just turret) destroy the weapon.* *Additional hits on a destroyed weapon are transferred to other randomly determined weapon systems*	

STARSHIP DAMAGE

When an attack hits a target, refer to the Ship Penetration Matrix Table below, then roll on the appropriate component damage table. Each weapon indicates (in its "hit" statistic) how many rolls to make on that table. Roll radiation damage separately on the Radiation Table. If a Gunner scores a particularly stunning hit with Effect 6+, shift one column to the left when reading damage. That is, if a gunner fired a beam laser and hit a target with Light Armor, it would normally do Surface damage. However, if that gunner rolled an Effect 6+, treat the target as Unarmored; the attack would do Internal damage.

SURFACE AND INTERNAL HIT DESCRIPTIONS

The following is a description of ship system internal hits. Note that if a system is destroyed, any more damage on the same system has no further effect.

BREACH

The ship suffers a hull breach and is exposed to vacuum. Anyone not wearing a space Suit or in a sealed compartment suffers exposure to vacuum per the Adventuring chapter. Staterooms are considered sealed for the purposes of this damage. On large ships of above 1000 tons, each Breach depressurizes 1000 tons of the ship.

BRIDGE

The bridge is hit.

First Hit: the crew suffers a Crew Hit (see below). DM-2 on all future Position rolls.

Second Hit: bridge disabled; Captain, Pilot, and Sensor Operator actions are impossible until the bridge is repaired, and Gunnery throws suffer DM-2. The crew suffers a Crew Hit (see below).

Third Hit: bridge irreparably destroyed; each bridge crew member suffers 4D damage, reduced by personal armor.

COCKPIT

The small craft's cockpit is hit.

First Hit: the crew suffers a Crew Hit (see below). DM-2 on all future Position rolls.

Second Hit: cockpit disabled; all actions are impossible; The crew suffers a Crew Hit (see below).

Third Hit: cockpit irreparably destroyed, and each bridge crew member suffers 4D damage.

CREW

1D crew members and passengers suffer 2D damage each. If there are fewer people than the number rolled, one or more of them, randomly determined, will receive multiple hits. Personal armor reduces this damage.

CRITICAL CREW HIT

All crew and passengers suffer 4D damage each. This damage can be reduced by personal armor.

Electronics

The electronic systems are hit.

First Hit: The electronics are scrambled. Until the system is repaired, the ship suffers a DM-2 to all Computer, Piloting, and Gunnery rolls.

Second Hit: The electronics are disabled. The ship cannot make any Piloting or Computer rolls and cannot maneuver; it loses any benefits from software until the electronics repaired. Manual gunnery is still possible at a DM-4.

Third Hit: The ship's electronic systems are completely burned out.

Subsequent Hits: No effect.

Fuel

The jump fuel tank is hit.

First Hit: 1Dx5% of fuel tank capacity is destroyed.

Second Hit: 1Dx10% of the fuel tank capacity is destroyed. This fuel loss is in addition to the losses of the first hit.

Third Hit: Fuel tanks destroyed; all jump fuel is lost

Hold

The cargo hold is hit.

First Hit: 1Dx5% of the cargo is destroyed.

Second Hit: 1Dx10% of cargo is destroyed. This cargo loss is in addition to the losses of the first hit.

Third Hit: the cargo hold, and all its contents are destroyed.

J-Drive

The ship's jump drive is hit.

First Hit: DM-2 to any attempt to jump.

Second Hit: jump drive disabled.

Third Hit: jump drive irreparably destroyed.

M-Drive

The maneuver drive is hit.

First Hit: halve the ship's remaining thrust (round down).

Second Hit: maneuver drive disabled. The ship is adrift and has a Position of 0.

Third Hit: maneuver drive irreparably destroyed.

Power Plant

The power plant is hit.

First Hit: halve the ship's thrust and jump rating (round down).

Second Hit: power plant disabled. The ship is functioning on emergency power. Energy weapons fire is impossible. The ship can maneuver but will always lose Position.

Third Hit: power plant irreparably destroyed. Emergency power remains for 1D hours; afterwards, life support systems will fail. Low berths are unaffected by this as they have an integral, long-term power supply.

Sensors

The ship's antennae and other sensor equipment are hit.

First Hit: ship sensor DM reduced by -1 (cumulative with electronics damage) Ship can no longer obtain Sensor Locks

Second Hit: ship sensor DM reduced by -2. Ship cannot make or break Sensor Locks and gunners suffer DM-2 to missile lock attempts.

Third Hit: Sensors disabled. Gunnery missile lock attempts suffer DM-6.

Weapons

Each hit disables one weapon in a given location.

Repairing Damage

Jury-rigged systems repaired using the Damage Control action will fail within 1D hours. After that, the system requires full repairs. Throw Engineering/EDU 8+ to fully repair a damaged system; this takes 1D hours and requires 0.02 tons of spare parts per ton of repaired system. A successful throw returns the system to operational status. A failed throw may be repeated but will require additional spare parts.

Spare parts cost Cr100,000 per ton, and may be stored in the ship's cargo bay.

Multiple engineers may work on repairs simultaneously, provided that each works on a different system. Alternatively, multiple engineers may work on the same repair using the Aid Another rules.

Replacing a destroyed system requires a shipyard and costs 2Dx10% of the system's original cost.

Space Combat Example: A Little Bit of the Ol' Piracy!

The Cast:

The Corsair *The Reaper*, Matitya Tarkwa, captain.

All crew skills are DM+3 (including characteristic bonuses) for simplicity's sake. However, the Pilot of *The Reaper* is an Ace, giving the ship advantage on Position rolls.

The Freighter *Star of Progress*, Gwen Stacey, captain.

All crew skills are DM+1 (including characteristic bonuses) for simplicity's sake.

The Patrol Frigate *Watchful*, Lt. Cmdr Yosef Khaleer, captain.

All crew skills are DM+3 (including characteristic bonuses) for simplicity's sake.

The infamous pirate *The Reaper* has fallen for the oldest trick in the book: being lured in by the Star of Progress, a fat, slow freighter with an escort frigate waiting to pounce!

First, the Referee has to determine if *The Watchful* has managed to catch the Reaper by surprise. This is an Opposed Computer/INT throw:

The Watchful: 5 + 3 (Skill bonus) + 1 (Sensor DM) = 9

The Reaper: 5 + 3 (Skill bonus) + 1 (Sensor DM) = 9

A tie! Fortunately for the *Reaper*, the pirate's sensor operator managed to spot the trap at the very last moment before Reaper moved in to board the Star of Progress. The Referee has ruled that the *Watchful* has to disable the Reaper in at most five rounds, or it will escape. The Reaper cannot perform Disengage actions until the fourth round.

ROUND 1

Position Rolls:

Reaper: 2D (advantage) + 3 (Crew skill) + 4 (Thrust) = 5 + 7 = 12

Watchful: 1D + 3 (Crew skill) + 4 (Thrust) = 5 + 7 = 12

Star of Progress: 1D + 1 (Crew skill) + 1 (Thrust) = 5 + 2 = 7

The *Reaper* and *Watchful* have Effect 0 on Position. They are able to attack each other, but each at a DM-2 penalty. The Referee rules that since the *Watchful* was ambushing the Reaper, it will go first.

The *Watchful*:

The **Captain** attempts to **Lead Crew**, throwing Leadership/INT 8+: 4 + 3 (Crew skill) = 7, which does not help.

The **Pilot** will perform an **Attack Vector** action so that at least one of the large particle beam turrets will have a better shot: Piloting/DEX 8+: 5 + 3 (Crew skill) = 8, which is not sufficient to provide a bonus.

The **Sensor Operator** will attempt to lock onto the Reaper: Computer/INT 8+: 4 + 3 (Crew skill) + 1 (Sensor DM) – 1 (Enemy Sensor DM) = 7. The Watchful is unable to gain a lock.

A LITTLE BIT OF THE OL' PIRACY CAST

The Corsair *Reaper*, Matitya Tarkwa, Captain; Tonnage: 300; Armor: Light Crystaliron; Streamlined
Maneuver: 4-G; Jump: 3; P-Plant: Rating 4; Fuel: 90 tons
Computer: Model/3, DM+1; Armament: 3x triple turrets: 1x missile, 2x pulse lasers
Fittings: 20 escape pods, armory for 10 marines, fuel processor (30t/day), 10 staterooms, 10 cryoberths, 5 emergency low berths, 57 tons of cargo space
Crew: 19 total – captain, pilot, sensor operator, medic, 2x engineers, 3xx gunners, 10 ship's troops. All crew at double occupancy except for the captain.
Cost: MCr157.4; Construction Time: 52 weeks

The Freighter *Star of Progress*, Gwen Stacey, captain.
All crew skills are DM+1 (including characteristic bonuses) for simplicity's sake.
Freighter; Tonnage: 600; Armor: None; Distributed
Maneuver: 1-G; Jump: 2; P-Plant: Rating 2; Fuel: 120 tons
Computer: Model/1adv, DM-2; Armament: 2x single turrets: 1 pulse laser, 1 sandcaster
Fittings: gig, 4 escape pods, 4 staterooms, 388 tons cargo
Crew: 4 total – pilot, sensor operator, 2x engineers.
Cost: MCr163.7; Construction Time: 78 weeks

The Patrol Frigate *Watchful*, Lt. Cmdr Yosef Khaleer, captain.
All crew skills are DM+3 (including characteristic bonuses) for simplicity's sake.

Frigate; Tonnage: 400; Armor: Light; Superdense Standard
Maneuver: 4-G; Jump: 3; P-Plant: Rating 4; Fuel: 120 tons
Computer: Model/3, DM+1; Armament: 4x triple turrets: 2 large particle beams, 1x pulse lasers, 1x sandcasters
Fittings: ship's boat, 24 escape pods, armory for 10 marines, fuel scoops, fuel processor (120t/day), 12 staterooms, 10 emergency low berths, repair drones, magazine for 48 sand canisters, 19.5 tons of cargo space
Crew: 22 total – captain, 3 pilots, 3x sensor operator, medic, 2x engineers, 4x gunners, 8x marines. All crew at double occupancy except for the captain.
Cost: MCr231.1; Construction Time: 52 weeks

The **Engineer** will Redline Engines for next round's Position throw. Engineering/EDU 8+: 6 + 3 (Crew skill) = 9, a success, finally! The next round, the Watchful's thrust will be 5G.

The **Gunners** open fire:

Large Particle Beam 1: Gunnery/DEX 8+: 12 + 3 (Crew skill) – 2 (Position DM) = 13, a solid hit, with Effect 5!

Large Particle Beam 2: Gunnery/DEX 8+: 6 + 3 (Crew Skill) – 2 (Position DM) = 7, a miss.

Pulse Laser Turret:

Laser 1: Gunnery/DEX 8+: 3 + 3 (Crew Skill) – 2 (Position DM) – 2 (Pulse) = 2, a miss.

Laser 2: Gunnery/DEX 8+: 11 + 3 (Crew Skill) – 2 (Position DM) – 2 (Pulse) = 10, a hit.

Laser 3: Gunnery/DEX 8+: 5 + 3 (Crew Skill) – 2 (Position DM) – 2 (Pulse) = 4, a miss.

Sandcaster Turret: launch sand to screen the Watchful.

Caster 1: Gunnery/DEX 6+: 9 + 3 (Crew skill) – 2 (Position DM) = 10, a success.

Caster 2: Gunnery/DEX 6+: 9 + 3 (Crew skill) – 2 (Position DM) = 10, a success.

Caster 3: Gunnery/DEX 6+: 4 + 3 (Crew skill) – 2 (Position DM) = 5, a failure.

The *Reaper's* lasers will have a DM-2 to hit the Watchful.

The large particle beam is an intermediate weapon. Against the Reaper's light armor, it causes two Internal hits and a radiation attack: 6, M-drive. The Reaper's thrust is halved to 2G; 8, Hold. 10% of the Reaper's cargo has been destroyed. The radiation attack result is a 2: no damage.

The *Reaper* now gets to act.

The **Captain** decides to **Lead Crew**, throwing Leadership/INT8+: 9 + 3 (Crew skill) = 12, for an Effect of 4. This gives a total of positive DMs of 4 for the captain to distribute as he sees fit. He thinks he will need it.

The **Engineer** will attempt to repair the **Maneuver** drive using **Damage Control**, Engineering/INT 8+, with the captain's DM+1 support: 6 + 3 (Crew skill) + 1 (Captain bonus) = 10. The Maneuver Drive is back to 4G! The Referee notes that this repair will fail in 1D = 4 hours.

Because the **Engineer** was successful, the Captain decides he does not need to give any support to the helm. The **Pilot** will attempt **Evasive Maneuvers**, rolling Piloting/DEX 12+: 5 + 3 (Crew Skill) + 4 (Available Thrust!) = 12, which succeeds! The Reaper will penalize attacks against it by DM-2 (assume the Pilot's skill is 2, with a DM+1 from a characteristic bonus). This DM will last until the Reaper's next turn.

The **Sensor Operator** will attempt a Sensor Lock on the Watchful. The Captain will provide a DM+1 bonus to ensure this works. Computers/INT 8+: 5 + 3 (Crew skill) + 1 (Sensor DM) – 1 (Sensor DM of enemy ship) + 1 (Captain's support) = 9, which succeeds. The gunners will each have a DM+1 to hit the Watchful.

The **Gunners** will fire all turrets:

Missile Triple Turret: consists of three missile racks, which means that the Gunner must lock on to the Watchful with Gunnery/INT 8+. However, since the Reaper has a sensor lock on target, the missiles can fire automatically. These are all normal missiles. They will hit at the end of next turn after the Watchful has a chance to shoot them down or spoof them.

Pulse Laser Turret 1: The captain supports the Gunnery roll with a DM+1 to hit for each.

Pulse Laser 1: Gunnery/DEX 8+: 7 + 3 (Gunnery Skill) + 1 (Support) – 2 (Position DM) – 2 (Pulse Laser) + 1 (Sensor Lock) – 2 (Sand penalty) = 6, a miss.

Pulse Laser 2: Gunnery/DEX 8+: 2 + 3 (Gunnery Skill) + 1 (Support) – 2 (Position DM) – 2 (Pulse Laser) + 1 (Sensor Lock) – 2 (Sand penalty) = 1, a miss.

Pulse Laser 3: Gunnery/DEX 8+: 10 + 3 (Gunnery Skill) + 1 (Support) – 2 (Position DM) – 2 (Pulse Laser) + 1 (Sensor Lock) – 2 (Sand penalty) = 9, a hit!

Pulse Laser Turret 2: the Gunners fire, and each get a DM+1 from the target lock.

Pulse Laser 4: Gunnery/DEX 8+: 10 + 3 (Gunnery Skill) – 2 (Position DM) – 2 (Pulse Laser) + 1 (Sensor Lock) – 2 (Sand penalty) = 8, a hit!

Pulse Laser 5: Gunnery/DEX 8+: 10 + 3 (Gunnery Skill) – 2 (Position DM) – 2 (Pulse Laser) + 1 (Sensor Lock) – 2 (Sand penalty) = 8, a hit!

Pulse Laser 6: Gunnery/DEX 8+: 12 + 3 (Gunnery Skill) – 2 (Position DM) – 2 (Pulse Laser) + 1 (Sensor Lock) – 2 (Sand penalty) = 10, a hit!

None of the 4 Pulse Laser hits had Effect 6+. Each one is a Light Weapon against Light Armor doing 2 hits. After consulting the Ship Penetration Matrix, that's six rolls on the Surface Hits table: a 2, three 7's, an 8, and two 9's. That's one scratch, four breaches and two Weapon hits. The three breaches are inconsequential for the *Watchful*, though might make for good roleplaying opportunities on a ship crewed by the player characters.

To determine which of the *Watchful's* weapons is disabled, consult the table under the Weapon damage effect: the result of 8 means a turret, and the Referee rolls randomly to determine which turret: 1: Sandcaster, 2: Pulse Laser, 3 & 4: Particle cannon, 5 & 6: Roll again. The result is 4! The *Watchful* has had one of its main guns disabled! The other weapon hits turret 2, which disables a single Pulse Laser.

The *Star of Progress* does not have Position on the Reaper and is turning to disengage. The Pilots roll opposed Piloting/DEX:

Star of Progress: 4 + 1 (Crew skill) + 1 (Thrust) = 6

Reaper: 4 + 3 (Crew skill) + 4 (Thrust) = 11

The Reaper blocks the *Star of Progress* from disengaging.

ROUND 2

Position Rolls:

Reaper: 2D (advantage) + 3 (Crew skill) + 4 (Thrust) = 5 + 7 = 12

Watchful: 1D + 3 (Crew skill) + 5 (Thrust modified from last round) = 1 + 8 = 9

Star of Progress: 1D + 1 (Crew skill) + 1 (Thrust) = 1 + 2 = 3

The *Reaper* has 3 points of Position on the *Watchful*, giving it a DM+0 to hit the frigate this round. The *Watchful* has a DM-3 to hit the Reaper with its turret weapons.

Captain Tarkwa manages to maneuver the *Reaper* into a good firing position on the *Watchful*. He pats the pilot on the shoulder, high praise from the bloodthirsty cutthroat!

The Captain **Leads Crew** and presses the attack! He throws Leadership/INT8+: 7 + 3 (Crew skill) = 10, for an Effect of 2. This gives a total of positive DMs of 2 for crew use later.

The Engineer will attempt to **Overcharge Weapon**, focusing on the first Pulse Laser triple turret. Engineering/EDU 8+: 5 + 3 (Crew skill) = 8. Success! The first Pulse Laser Turret will have a DM+1 to hit for all three lasers.

Because the Engineer was successful in restoring the Maneuver drive, the Captain decides he does not need to give any support to the helm. The **Evasive Maneuvers** are finished, so the **Pilot** puts the ship on an optimal Attack Vector: Pilot/DEX 8+: 7 + 3 (Crew skill) = 10, which is an Effect of 2, meaning that either one Pulse Laser will have a DM+2 to hit, or two will have DM+1 to hit.

Since last round's **Sensor Lock** is still active, the Sensor Operator attempts a **Target Systems** action on the Watchful, aiming for the ship's weapons. Computers/EDU 10+: 11 + 3 (Crew skill) + 1 (Sensor DM) = 15, which succeeds. One of the Pulse Lasers will be able to target the Weapons systems.

The Gunners **fire all turrets**:

Missile Triple Turret: the gunners already have a lock, so they fire another salvo of three missiles. They will hit at the end of the next turn.

Pulse Laser Turret 1: The captain supports the Gunnery roll of the single Pulse Laser that is targeting the Watcher's weapon systems with DM+2. The Pilot will give DM+2 to that pulse laser as well. All of the turret's guns gain a DM+1 for Sensor Lock, and a DM+1 for the Engineer's Weapon Overcharge.

Pulse Laser 1: Gunnery/DEX 8+, targeting the Weapons system: 9 + 3 (Gunnery Skill) + 2 (Support) + 1 (Sensor Lock) + 2 (Attack Vector) + 1 (Overcharge) – 2 (Pulse Laser) – 2 (Sand penalty) = 14, a hit with Effect 6!

Pulse Laser 2: Gunnery/DEX 8+: 3 + 3 (Gunnery Skill) + 1 (Sensor Lock) + 1 (Overcharge) – 2 (Pulse Laser) – 2 (Sand penalty) = 4, a miss.

Pulse Laser 3: Gunnery/DEX 8+: 9 + 3 (Gunnery Skill) + 1 (Sensor Lock) + 1 (Overcharge) – 2 (Pulse Laser) – 2 (Sand penalty) = 10, a hit!

Pulse Laser Turret 2: each weapon gets a DM+1 from the Sensor Lock.

Pulse Laser 4: Gunnery/DEX 8+: 5 + 3 (Gunnery Skill) + 1 (Sensor Lock) – 2 (Pulse Laser) – 2 (Sand penalty) = 6, a miss.

Pulse Laser 5: Gunnery/DEX 8+: 3 + 11 (Gunnery Skill) + 1 (Sensor Lock) – 2 (Pulse Laser) – 2 (Sand penalty) = 8, a hit.

Pulse Laser 6: Gunnery/DEX 8+: 3 + 4 (Gunnery Skill) + 1 (Sensor Lock) – 2 (Pulse Laser) – 2 (Sand penalty) = 5, a miss.

The Pulse Laser that hit the Weapon Systems would normally do Surface damage against a Lightly armored vessel. However, because the Effect is 6+, we shift left one column on the Ship Penetration Matrix Table and see that the damage is Internal. The Pulse Laser automatically hits the Weapon Systems, and the Referee rolls to determine which turret on the *Watchful* has been hit: 1: Sandcaster, 2: Pulse Laser, 3 & 4: Particle cannon, 5 & 6: Roll again. 4, which means that the Large particle cannon that was hit last turn is now destroyed. This is less than ideal, as it still leaves one particle cannon.

The other two Pulse Lasers each score 2 hits on the Surface Hits table for 5, 6, 4, and 6, which all score the armor, but do not penetrate the *Watchful's* hull.

Now, it's the Watchful's turn.

The Captain is going to **Lead Crew** because they will need the extra leadership! Leadership/INT 8+: 3 + 3 (Crew skill) = 6, for no bonuses at all! This round just went from bad to worse.

The **Pilot** attempts **Evasive Maneuvers**, mainly because there are three missiles inbound this round, and next, and maybe it will help. Piloting/DEX 12+: 6 + 3 (Crew Skill) + 4 (Available Thrust!) = 13, which penalizes attacks on the Watchful by the pilot's skill of 2 (assume Pilot 2 and DEX 1 for this example), for DM-2.

The Engineer will attempt **Damage Control** on the Pulse Laser disabled in the first round. With three missiles coming in, all pulse lasers are going to be very useful for Point Defense, and the Large plasma cannon is damaged beyond repair. Engineering/INT 8+: 7 + 3 (Crew skill) = 10, the Pulse Laser is repaired! The Referee notes that it will fail in 1D = 1 hour.

It is time for the Sensor Operator to **Spoof Missiles**! They may spoof as many missiles as levels in Computer (2), at Computer/INT 8+: 7 + 3 (Crew skill) = 10. That's one missile jammed. The second Computer/INT

8+ throw is: 5 + 3 (Crew skill) 8. A second missile is spoofed. One more remains.

The Gunners now return **fire**. They are at DM-3 for their bad Position, but they can fire turrets. They suffer no other penalties.

Large Particle Beam 1: Destroyed!

Large Particle Beam 2: Gunnery/DEX 8+: 11 + 3 (Crew Skill) – 3 (Position DM) = 11, a solid hit!

Pulse Laser Turret: all the weapons in a turret must be devoted to Point Defense. Since they are Pulse Lasers, they gain a DM+2 to hit incoming missiles, but each missile after the first is attacked at a cumulative DM-1.

Laser 1: Gunnery/DEX 10+: 5 + 3 (Crew Skill) + 2 (Pulse) = 10, one missile is destroyed. One remains.

Laser 2: Gunnery/DEX 10+: 12 + 3 (Crew Skill) + 2 (Pulse) – 1 (first additional missile) = 15, the second missile is destroyed!

Laser 3: Gunnery/DEX 10+: all missiles destroyed–this weapon fires pulses into space.

Sandcaster Turret: Launches Sand to screen the Watchful.

Caster 1: Gunnery/DEX 6+: 6 + 3 (Crew skill) – 3 (Position DM) = 6, a success.

Caster 2: Gunnery/DEX 6+: 5 + 3 (Crew skill) – 3 (Position DM) = 5, a failure.

Caster 3: Gunnery/DEX 6+: 3 + 3 (Crew skill) – 3 (Position DM) = 3, a failure.

The *Reaper's* lasers will have a DM-1 to hit the *Watchful* until the latter ship's next turn.

The large particle beam is an intermediate weapon. Against the *Reaper's* light armor, it causes two Internal hits and a radiation attack: 6, and 5: one M-drive hit, and one weapon hit! The *Reaper's* thrust is halved to 2G; The Referee randomly determines that the Missile Turret is hit, and one missile rack has been disabled.

The *Star of Progress* now acts, and attempts to disengage throwing opposed Pilot/DEX:

Star of Progress: 3 + 1 (Crew skill) + 1 (Thrust) = 5

Reaper: 10 + 3 (Crew skill) + 2 (Thrust) = 15

There is still no escape for the *Star of Progress*!

ROUND 3

Position Rolls:

Reaper: 2D (advantage) + 3 (Crew skill) + 2 (Thrust) = 5 + 5 = 10

Watchful: 1D + 3 (Crew skill) + 4 (Thrust) = 1 + 7 = 8

Star of Progress: 1D + 1 (Crew skill) + 1 (Thrust) = 3 + 2 = 5

Despite the damaged drive, the *Reaper's* superior maneuvering wins out! Captain Tarkwa has tasted blood, and he wants to send a message to whoever planned this trap. Since the *Reaper's* Position is two points higher than the *Watchful's*, it attacks at DM-1 to hit.

The Captain **Leads Crew** and throws Leadership/INT 8+: 12 + 3 (Crew skill) = 15, for an impressive Effect of 7. This gives a total of positive DMs of 7 for crew use later!

The Engineer wants to repair the Maneuver drive using **Damage Control**, but the captain stops him: he wants another Weapon Overcharge on the first pulse laser turret! Engineering/EDU 8+, with the captain's DM+1 support: 9 + 3 (Crew skill) + 1 (Captain support) = 13. The three guns of that turret each get a DM+1 to hit. The Engineer grumbles that if they survive this encounter, the *Reaper* will start training up a damage control specialist.

The Pilot was going to protest but thinks better of it. Instead, he performs **Evasive Maneuvers** while bringing the *Reaper* in for another pass. The Captain encourages him with a DM+2 (leaving DM+4 left to distribute). Piloting/DEX 12+: 5 + 3 (Crew skill) + 2 (Captain's support) + 2 (Thrust) = 12, which is just enough for the evasive action to be effective. The Watchful will suffer an additional DM-2 penalty on attacks against the *Reaper*.

The Sensor Lock is still active. The Sensor Operator attempts another **Target Systems** action on the *Watchful*, aiming for the ship's M-drive. Computers/EDU 10+: 8 + 3 (Crew skill) + 1 (Sensor DM) = 12, which succeeds. One of the Pulse Lasers (from the first pulse laser turret) will be able to target the Weapons systems.

The Gunners **fire all turrets**:

Missile Triple Turret: the gunners already have a lock, so they fire another salvo. One of the racks has been disabled, so only two missiles launch. They will hit at the end of next turn.

Pulse Laser Turret 1: The captain supports the Gunnery roll of the single Pulse Laser that is targeting the Watchful's M-drive with DM+4. All of the turret's guns gain a DM+1 for Sensor Lock, and a DM+1 for the Engineer's Weapon Overcharge. There is a DM-1 Position penalty, a DM-1 Sandcaster penalty from the Watchful, and the Watchful is performing Evasive Maneuvers (DM-2).

Pulse Laser 1: Gunnery/DEX 8+, targeting the M-drive: 7 + 3 (Gunnery Skill) + 4 (Support) + 1 (Sensor Lock) + 1 (Weapon Overcharge) – 1 (Position) – 1 (Sand penalty) – 2 (Evasive penalty) – 2 (Pulse Laser) = 10, a solid hit with effect 2.

Pulse Laser 2: Gunnery/DEX 8+: 9 + 3 (Gunnery Skill) + 1 (Sensor Lock) + 1 (Weapon Overcharge) – 1 (Position) – 1 (Sand penalty) – 2 (Evasive penalty) – 2 (Pulse Laser) = 8, a hit.

Pulse Laser 3: Gunnery/DEX 8+: 10 + 3 (Gunnery Skill) + 1 (Sensor Lock) + 1 (Weapon Overcharge) – 1 (Position) – 1 (Sand penalty) – 2 (Evasive penalty) – 2 (Pulse Laser) = 9, a hit.

Pulse Laser Turret 2: each weapon gets a DM+1 from the Sensor Lock. There is a DM-1 Position penalty, a

DM-1 Sandcaster penalty from the Watchful, and the Watchful is performing Evasive Maneuvers (DM-2).

Pulse Laser 4: Gunnery/DEX 8+: 7 + 3 (Gunnery Skill) + 1 (Sensor Lock) – 1 (Position) – 1 (Sand penalty) – 2 (Evasive penalty) – 2 (Pulse Laser) = 5, a miss.

Pulse Laser 5: Gunnery/DEX 8+: 8 + 3 (Gunnery Skill) + 1 (Sensor Lock) – 1 (Position) – 1 (Sand penalty) – 2 (Evasive penalty) – 2 (Pulse Laser) = 6, miss.

Pulse Laser 6: Gunnery/DEX 8+: 8 + 3 (Gunnery Skill) + 1 (Sensor Lock) – 1 (Position) – 1 (Sand penalty) – 2 (Evasive penalty) – 2 (Pulse Laser) = 6, miss.

Checking the Ship Penetration Matrix Table, these light weapons are attacking light armor. This means that since the Pulse Laser that was targeting the Maneuver drive did not score a solid Effect 6+ hit, it cannot hit the M-drive, and is ineffective against the armor plate around the M-drive. The other two Pulse laser hits do a total of 4 surface damage rolls, 10, 9, and two 3's: the 10 is a Weapon hit, so the Referee randomly determines that the Sandcaster turret was hit, and one of the Sandcasters has been disabled. The 9 is also a Weapon hit, and the Referee determines that the blast hit the Sandcaster turret again, knocking out another Sandcaster.

The Watchful acts:

Shaking off the shock of being outmaneuvered by pirates, the Captain is going to Lead Crew because they will need the extra leadership! Leadership/INT8+: 8 + 3 (Crew skill) = 11, for a DM+3 total to distribute to other stations.

The Pilot again attempts **Evasive Maneuvers**, because another volley of three missiles are inbound at the end of the round! Piloting/DEX 12+: 3 + 3 (Crew Skill) + 4 (Available Thrust!) = 10, which provides no penalty to enemy fire!

The Engineer will attempt **Damage Control** on a Sandcaster, to help screen the ship!. Engineering/INT 8+: 9 + 3 (Crew skill) = 12, and the Engineer manages to return one of the sandcasters to functionality for 1D = 5 hours.

The Sensor Operator will **Spoof Missiles** again. They may spoof two missiles at Computer/INT 8+: 7 + 3 (Crew skill) = 10, a success. That's one missile jammed. The *Watchful's* Captain applies a +2 support bonus to the second roll. The second Computer/INT 8+ throw is: 3 + 3 (Crew skill) +2 (Captain's support) 8. Another missile is fooled, and one remains on course.

The *Watchful's* Gunners open fire. They are at DM-3 for their bad Position, but they can fire turrets. They suffer DM-2 for the Reaper's Evasive Maneuvers.

Large Particle Beam 1: Destroyed!

Large Particle Beam 2: Gunnery/DEX 8+: 8 + 3 (Crew Skill) – 3 (Position DM) – 2 (Evasive) = 6, a miss.

Pulse Laser Turret: all the weapons in a turret are devoted to Point Defense. Since they are Pulse Lasers, they gain a DM+2 to hit incoming missiles, but each missile after the first is attacked at a cumulative DM-1. The Captain provides support to the first Pulse Laser (DM+1).

Laser 1: Gunnery/DEX 10+: 3 + 3 (Crew Skill) + 2 (Pulse) +1 (Captain's Support) = 9, a miss. One missile remains.

Laser 2: Gunnery/DEX 10+: 5 + 3 (Crew Skill) + 2 (Pulse) = 9, a miss. One missile remains.

Laser 3: Gunnery/DEX 10+: 5 + 3 (Crew skill) + 2 (pulse) – 1 (additional missile) = 9 miss! One missile remains to attack!

Sandcaster Turret: Launches Sand to screen the Watchful.

Caster 1: Gunnery/DEX 6+: 6 + 3 (Crew skill) – 3 (Position DM) = 6, a success.

Caster 2: Gunnery/DEX 6+: 9 + 3 (Crew skill) – 3 (Position DM) = 9, a success.

Caster 3: Disabled

The *Reaper's* lasers will have a DM-2 to hit the *Watchful*.

The *Star of Progress* acts, and attempts to disengage throwing opposed Pilot/DEX:

Star of Progress: 5 + 1 (Crew skill) + 1 (Thrust) = 7

Reaper: 7 + 3 (Crew skill) + 2 (Thrust) = 12

There is still no escape for the *Star of Progress*!

Finally, the missile that got through the *Watchful's* defenses attacks at 4+, with a new DM-2 Sandcaster penalty: 6 – 2 = 4, a hit!

The missile is a light weapon and does 1D hits: 6! The rolls on the Surface damage table are: 9, 9, 3, 6, 8, 11. Two hits do no damage, two hit Weapons, one causes a breach, and one hits Electronics!

The Electronics hit penalizes all Computer, Piloting, and Gunnery throws on the Watchful by DM-2.

The two weapons that are hit are: a Pulse Laser and a Sandcaster are both disabled.

The breach likely does no major damage since the Watchful would have been depressurized for combat operations.

Round 4:

Position Rolls:

Reaper: 2D (advantage) + 3 (Crew skill) + 2 (Thrust) = 6 + 5 = 11

Watchful: 1D + 3 (Crew skill) + 4 (Thrust) = 3 + 7 = 10

Star of Progress: 1D + 1 (Crew skill) + 1 (Thrust) = 1 + 2 = 3

Captain Tarkwa is concerned. Despite all the damage he has managed to inflict on the *Watchful*, he hasn't crippled it. And it is recovering. He orders the Pilot to disengage and rolls to **Lead Crew** to support the effort: Leadership/INT 8+: 9 + 3 (Crew skill) = 12, an Effect of 4.

The Pilot breathes out a sigh of relief, and moves to **Disengage**, which is an opposed throw.

Reaper (with Advantage for having Position): 7 + 3 (Crew skill) + 2 (Thrust) + 4 (Captain's support) = 16

Watchful: 7 + 3 (Crew skill) + 4 (Thrust) – 2 (Electronics damage) = 12.

The *Reaper* successfully extricates itself from the trap, and quickly plots a jump to a safer system. ***Captain Tarkwa will have his revenge!***

COMMON SPACE CRAFT DESIGNS

Some ship classes are common in a typical Cepheus Deluxe setting. Many other classes and designs certainly exist, but the following are very useful for a typical campaign.

These designs provide the minimum tech level required to construct each ship; in many cases, more advanced shipyards often construct them. However, lower tech guarantees universal production and maintenance across many worlds with varied technological capabilities.

SMALL CRAFT AND SYSTEM SHIPS

Below are a few common small craft and system ship designs. All prices include the 10% mass-production discount.

DROPSHIP

The dropship is a military ground-assault craft designed to deploy a platoon – approximately 40 troops commanded by a Lieutenant – into contested territory.

Dropshop; Tonnage: 50; Armor: Light Crystaliron; Streamlined
Maneuver: 4-G; P-Plant: Rating 4

COMMON CUTTER MODULES

MODULE TYPE	COST (MCR)	NOTES
Cargo	2.8	Cargo (29 tons), 1 airlock
Commuter	4.1	Acceleration couches (56 people), 1 airlock, 1 small fresher/kitchenette
Fuel	2.7	Fuel tankage (30 tons),
Laboratory	29	Laboratory (7 scientists), 2 airlocks
Low Berth		
Transport	8.0	58 low berths, 1 airlock
Luxury Suites	6.1	7 staterooms, 2 airlocks
Vehicular Transport	3.0	Hangar (25 tons of vehicles, 5 tons of parts and equipment), allows repairs/maintenance
Each module is 30 tons to attach to the Cutter's hold		

Computer: Model/2, DM+0; Armament: Double turret - sandcaster and pulse laser
Fittings: 42 acceleration couches, 2.3 tons cargo, airlock
Crew: 2 – pilot and gunner in a 2-person cockpit
Cost: MCr43.8; Construction Time: 26 weeks

TL13 10-TON FIGHTER

The fighter is an advanced, light attack craft and interceptor.

Fighter; Tonnage: 10; Armor: None; Streamlined
Maneuver: 6-G;P-Plant: Rating 6
Computer: Model/1, DM-2; Armament: Triple turret: Large Laser Gun
Fittings: 0.1 tons cargo
Crew: pilot in a 1-person cockpit
Cost: MCr15.0; Construction Time: 26 weeks

TL10 10-TON GIG

The gig is a general-purpose utility runabout.

Gig; Tonnage: 10; Armor: None; Streamlined
Maneuver: 2-G; P-Plant: Rating 2
Computer: None, DM-4; Armament: None
Fittings: 6.9 tons of cargo space
Crew: pilot in a 1-person cockpit
Cost: MCr4.6; Construction Time: 26 weeks

TL9 20-TON LAUNCH

The Launch often serves as a lifeboat or small transport craft.

Launch; Tonnage: 20; Armor: None; Streamlined
Maneuver: 1-G; P-Plant: Rating 1
Computer: None, DM-4; Armament: None
Fittings: 14.8 tons of cargo space (other fittings are usually added as required)
Crew: pilot in a 1-person cabin
Cost: MCr6.9; Construction Time: 26 weeks

TL12 40-TON PINNACE

The pinnace is a medium-sized fast shuttle craft.

Pinnace; Tonnage: 40; Armor: None; Streamlined
Maneuver: 5-G; P-Plant: Rating
Computer: Model/1, DM-2; Armament: one hardpoint reserved for weapons systems
Fittings: 23.8 tons of cargo space, airlock
Crew: pilot in a 1-person cabin
Cost: MCr32.6; Construction Time: 26 weeks

TL12 50-TON CUTTER

The cutter carries a sealed 30-ton module from surface to orbit, allowing for a wide range of customized uses, depending on the contents of the module, as noted in the table below.

Cutter; Tonnage: 50; Armor: None; Streamlined

Maneuver: 4-G; P-Plant: Rating 4
Computer: Model/1, DM-2; Armament: one hardpoint reserved for weapons systems
Fittings: 1x30-ton cutter module, airlock
Crew: pilot in a 1-person cabin
Cost: MCr33.3; Construction Time: 26 weeks

TL9 30-TON SHIP'S BOAT

The ship's boat is a small multi-use vessel with powerful engines.
Ship's Boat; Tonnage: 30; Armor: None; Streamlined
Maneuver: 6-G; P-Plant: Rating 6
Computer: Model/1, DM-2; Armament: one hardpoint reserved for weapons systems
Fittings: 10.5 tons of cargo
Crew: pilot in a 1-person cockpit
Cost: MCr42.3; Construction Time: 26 weeks

TL9 95-TON SHUTTLE

The shuttle is a heavy transport craft often used to ferry passengers and cargo between surface and orbit.
Shuttle; Tonnage: 95; Armor: None; Streamlined
Maneuver: 3-G; P-Plant: Rating 3
Computer: None, DM-4; Armament: None
Fittings: 62.3 tons of cargo space, airlock, some of the cargo space is often traded for acceleration couches, or 30-ton modules.
Crew: pilot in a 2-person control cabin
Cost: MCr67.7; Construction Time: 26 weeks

TL12 200-TON SYSTEM DEFENSE BOAT

Most planetary systems have a defensive force to fight pirates and protect against invasions from hostile neighbors. The 200-ton SDB is a common design seen in many systems.
Defense Boat; Tonnage: 200; Armor: Heavy Crystaliron; Streamlined, Stealth
Maneuver: 6-G; P-Plant: Rating 6
Computer: Model/4, DM+2; Armament: 2x triple turrets: large plasma gun, pulse lasers
Fittings: 17 staterooms, repair drones, 2x10-ton fighters, ship's boat, 17x escape pods, armory for 10 marines
Crew: 17: CO, 3x pilots, 3x sensors, engineer, 2x gunners, medic, 4x marines, 2xflight
Cost: MCr141.2; Construction Time: 52 weeks

STARSHIPS

The following are common and archetypal starships useful in a typical Cepheus Deluxe universe.

TL12 800-TON ASSAULT SHIP

The assault ship is a front-line troop carrier capable of deploying a platoon (42 troopers including the commanding Lieutenant) of marines across interstellar distances.
Assault Ship; Tonnage: 800; Armor: Heavy Crystaliron Standard
Maneuver: 3-G; Jump: 3; P-Plant: Rating 3; Fuel: 240 tons
Computer: Model/3, DM+1; Armament: 8x triple turrets: 3x pulse lasers, 2x particle beams, 2x missile racks, 1x sandcasters
Fittings: Dropship, 61 escape pods, armory for 50 marines, fuel scoops, fuel processor (60t/day), 31 staterooms, 16 emergency low berths, missile magazine (72 missiles), 64.5 tons of cargo space
Crew: 61 total - CO, 3x sensor operators, 3x pilots, 3x engineers, medic, 8x gunners, 42x marines. All crew double occupancy except captain.
Cost: MCr395.5; Construction Time: 78 weeks

TL12 300-TON CORSAIR

The corsair is a light attack vessel intended for raiding enemy commerce and now often employed by independent pirates and mercenaries.
Corsair; Tonnage: 300; Armor: Light Crystaliron; Streamlined
Maneuver: 4-G; Jump: 3; P-Plant: Rating 4; Fuel: 90 tons
Computer: Model/3, DM+1; Armament: 3x triple turrets: 1x missile, 2x pulse lasers
Fittings: 20xescape pods, armory for 10 marines, fuel processor (30t/day), 10xstaterooms, 10xcryoberths, magazine (12 missiles), 5xemergency low berths, 54.0 tons of cargo space
Crew: 19 total – CO, pilot, sensor operator, medic, 2x engineers, 3x gunners, 10x ship's troops. All crew at double occupancy except for the captain.
Cost: MCr157.9; Construction Time: 52 weeks

TL13 1000-TON CRUISER

The cruiser is a ship-of-the-line capable of extended independent operations. It carries two squads (total 16 troopers) of marines.
Cruiser; Tonnage: 1000; Armor: Massive Superdense; Standard
Maneuver: 4-G; Jump: 4; P-Plant: Rating 4; Fuel: 400 tons
Computer: Model/4, DM+2; Armament: Meson bay, 5x triple turrets: 2x large fusion, 3x pulse lasers
Fittings: Ship's boat, 40xescape pods, armory for 20 marines, fuel scoops, fuel processor (40t/day), 40 staterooms, 16xemergency low berths, 16.0 tons of cargo space

Crew: 39 total - CO, 3x sensor operators, 3x pilots, 5x engineers, medic, 7x gunners, 16x marines, 2x flight
Cost: MCr708.5; Construction Time: 78 weeks

TL12 400-TON EXPLORER

The explorer is a long-range survey vessel equipped for prolonged excursions to unknown stars.
Explorer; Tonnage: 400; Armor: None; Streamlined
Maneuver: 3-G; Jump: 3; P-Plant: Rating 3; Fuel: 120 tons
Computer: Model/3, DM+1; Armament: none; 4 hardpoints reserved for weapon systems
Fittings: 6x escape pods, laboratory unit, 20x probe drones, 10 tons of mining drones, Aircar, fuel processor (40t/day), 6x staterooms, 10x low berths, 44.1 tons cargo
Crew: 6 total – CO/pilot, sensor operator, 2x engineers, medic, science officer.
Cost: MCr173.0; Construction Time: 52 weeks

TL11 600-TON FREIGHTER

The freighter carries goods between orbital starports without entering planets' atmospheres.
Freighter; Tonnage: 600; Armor: None; Distributed
Maneuver: 1-G; Jump: 2; P-Plant: Rating 2; Fuel: 120 tons
Computer: Model/1Adv, DM-2 Armament: none, 4 hardpoints reserved for weapon systems
Fittings: gig, 4x escape pods, 4x staterooms, 375.4 tons cargo
Crew: 4 total – pilot, sensor operator, 2x engineers.
Cost: MCr187.1; Construction Time: 78 weeks

TL12 400-TON FRIGATE

The frigate is a light naval ship used for anti-piracy patrols and customs inspections.
Frigate; Tonnage: 400; Armor: Light Superdense; Standard
Maneuver: 4-G; Jump: 3; P-Plant: Rating 4; Fuel: 120 tons
Computer: Model/3, DM+1; Armament: 4x triple turrets: 2 large particle beams, 1x pulse lasers, 1x sandcasters
Fittings: ship's boat, 26x escape pods, armory for 10 marines, fuel scoops, fuel processor (120t/day), 13x staterooms, 10 emergency low berths, repair drones, magazine (48 sand canisters), 17.0 tons of cargo space
Crew: 24 total – CO, 3x pilots, 3x sensor operator, medic, 2x engineers, 4x gunners, 8x marines, 2x flight. All crew at double occupancy except for the captain.
Cost: MCr234.0; Construction Time: 52 weeks

TL11 400-TON SUBSIDIZED MERCHANT

The subsidized merchant is a common interstellar merchant vessel. Governments often finance these vessels to provide services to systems on less profitable frontier routes.
Subsidized Merchant; Tonnage: 400; Armor: None; Streamlined
Maneuver: 1-G; Jump: 2; P-Plant: Rating 2; Fuel: 80 tons
Computer: Model/1bis, DM-2; Armament: none; 2 hardpoints reserved for weapon systems
Fittings: 16 escape pods, 16 staterooms, 10 low berths, 189.6 tons cargo
Crew: 6 total – pilot, sensor operator, 2x engineers, medic, steward.
Cost: MCr140.5; Construction Time: 52 weeks

TL11 100-TON PROSPECTOR

The prospector is a light asteroid mining vessel often operated by independent belters.
Prospector; Tonnage: 100; Armor: None; Standard
Maneuver: 2-G; Jump: 2; P-Plant: Rating 2; Fuel: 20 tons
Computer: Model/2: DM+0; Armament: single turret: beam laser
Fittings: Gig, 2x escape pods, 10-tons of mining equipment, 5x probe drones, fuel scoops, fuel processor (10t/day), 2 staterooms, 21,7 tons cargo
Crew: 2 total – pilot/sensors and gunner/engineer.
Cost: MCr41.5; Construction Time: 52 weeks

TL12 200-TON RESEARCH VESSEL

The research vessel allows scientists to carry their laboratories to the stars and conduct interstellar studies.
Research Vessel; Tonnage: 200; Armor: None; Standard
Maneuver: 2-G; Jump: 2; P-Plant: Rating 2; Fuel: 40 tons
Computer: Model/2, DM+0; Armament: 2 tons reserved for weapon systems
Fittings: Gig, 12x escape pods, 8x laboratory units, 12x staterooms, 12x low berths, 23.8 tons cargo
Crew: 12 total – pilot, sensor operator, engineer, medic, 8xscientists.
Cost: MCr98.9; Construction Time: 52 weeks

TL11 100-TON SCOUT SHIP

The scout ship is a small exploration and courier vessel operable by a single scout but often crewed by a team of 3 or 4 explorers.
Scout Ship; Tonnage: 100; Armor: None; Streamlined
Maneuver: 2-G; Jump: 2; P-Plant: Rating 2; Fuel: 20 tons
Computer: Model/2, DM+0; Armament: double turret: weapons purchased separately

Fittings: 4x escape pods, 20x probe drones, aircar, fuel scoops, fuel processor (10t/day), 4x staterooms, 4x emergency low berth, 24.7 tons cargo
Crew: 1 Pilot; optionally, also sensor operator, engineer, and gunner
Cost: MCr41.2; Construction Time: 52 weeks

TL11 200-TON TRADER

The trader is a light, often independent, commercial vessel.
Trader; Tonnage: 200; Armor: None; Standard
Maneuver: 1-G; Jump: 2; P-Plant: Rating 2; Fuel: 40 tons
Computer: Model/1Adv, DM-2 ; Armament: 2 hardpoints reserved for weapon systems
Fittings: 10x escape pods, 10x staterooms, 20x low berths, fuel processor (10t/day), 70.8 tons cargo
Crew: 5 total – pilot, sensor operator, engineer, medic, steward.
Cost: MCr71.7; Construction Time: 52 weeks

TL11 100-TON YACHT

The yacht is a plaything and a transport for people of considerable wealth and power.
Yacht; Tonnage: 100; Armor: None; Streamlined
Maneuver: 2-G; Jump: 2; P-Plant: Rating 2; Fuel: 20 tons
Computer: Model/2, DM+0; Armament: one hardpoint reserved for weapon systems
Fittings: 10x escape pods, fuel scoops, 10x staterooms (2 of them joined together to form a luxurious suite), 4x emergency low berth, fuel processor (10t/day), 8.7 tons cargo
Crew: 5 total – pilot, sensor operator, engineer, medic, steward.
Cost: MCr42.4; Construction Time: 52 weeks

WORLD GENERATION

Countless worlds await the hardy adventurer or intrepid explorer. This chapter provides quick and simple rules for generating worlds and subsectors of space with several worlds in them.

STAR MAPPING

These rules greatly abstract astrography by using two-dimensional star maps to represent three-dimensional space. The standard map is a subsector, 8 hexagons wide and 10 hexagons long. Each of those hexagons represents a parsec (3.26 light years), which is roughly the size of one solar system. 2 by 2 subsectors form a quadrant of 16x20 hexagons, and 4 by 4 subsectors (2 by 2 quadrants) are a sector of 32 by 40 hexagons. Blank subsector, quadrant, and sector maps are readily available for free on-line; a blank subsector map is supplied here.

When randomly generating a subsector, a world is normally present in each subsector hexagon on a throw of 4+ on 1D. If a world is present, it has a gas giant in its system on a throw of 5+ on 2D. Gas giants are important for exploration as they allow accessible frontier refueling. The Referee is free to increase or decrease the target number to represent denser or sparser regions of space but remember: ships must have a star at each end of their jump, so a very sparse region of space might represent an impassable boundary for lower tech interstellar civilizations.

WORLD CREATION

The process of creating worlds in Cepheus Deluxe involves making a series of 2D rolls and applying modifiers based on the planetary characteristic being generated. It is important to retain the rolled value, after all modifiers, for use with other characteristics. For example, the Size roll is used as a modifier for both the Atmosphere and Hydrographics rolls for the world.

Details of the mainworld in a system are determined using the following procedure:

1. Roll World Size
2. Roll Atmosphere, use the Size rating as a modifier
3. Roll Hydrographics, use the Size rating as a modifier
4. Roll Population
5. Roll Government, use the Population rating as a modifier
6. Roll Law Level, use the Government rating as a modifier
7. Roll Starport, use the Population rating as a modifier
8. Roll Tech Level, use all the above characteristics as modifiers
9. Determine Trade Codes, use all the above characteristics as modifiers
10. Determine Bases, use the Starport rating as a modifier
11. Apply any Allegiances, trade lines etc. based on the setting
12. Develop the world using everything above and your imagination.

Using random rolls to develop a world can create some very unusual, or even impossible, characteristic combinations. Most commonly, the world size might not support the other physical characteristics, or the population doesn't match the habitability of the planet. The Referee should feel free to change any of these as needed, but we certainly encourage trying to figure out an interesting reason for the unusual conditions to exist.

Referees (and others) can use these world-building rules to create the main world, or most inhabited world, in each star system. These rules are not intended to create every planetary body in a given solar system. If the Referee wishes to add further detail to a star system, they could select the characteristics that make sense to them or find an online random system generator to do some of the heavy lifting for creating more details.

This process is designed to produce an interesting mix of worlds as might be found in a frontier subsector. Referees should adjust these rolls, especially the social characteristics of Population, Government, Starport, and even Tech Level to fit the setting they are creating.

WORLD SIZE

Throw 2D-2 and consult the following table to determine the world's Size rating.

Surface gravity is an approximation using Earth standard gravity (9.8m/s2) as one "g".

ATMOSPHERE

Throw 2D-7 and add the world's Size rating to determine the world's Atmosphere rating. If a world's Size rating is 0, the Atmosphere rating is also 0. The Atmosphere rating cannot be lower than 0 or higher than 15.

ATMOSPHERE NOTES

Vacuum: there is no atmosphere. Organic beings require a space suit to survive.

Trace: there is extremely low atmospheric pressure. Operating on the surface requires a space suit.

WORLD SIZE

ROLL	DIAMETER	SURFACE GRAVITY
0	Asteroid belt	Negligible
1	1600km	0.05g
2	3200km	0.15g
3	4800km	0.25g
4	6400km	0.35g
5	8000km	0.45g
6	9600km	0.7g
7	11200km	0.9g
8	12800km	1.0g
9	14400km	1.25g
10	16000km	1.4g

ATMOSPHERE

ROLL	ATMOSPHERE	SURVIVAL GEAR REQUIRED
0 -	Vacuum	Space suit
1	Trace	Space suit
2	Very Thin – Tainted	Breather with air supply
3	Very Thin	Breather with air supply
4	Thin – Tainted	Breather
5	Thin	-
6	Standard	-
7	Standard – Tainted	Breather
8	Dense	-
9	Dense – Tainted	Breather
10	Exotic	Breather with air supply
11	Corrosive	Space suit
12	Insidious	Space suit, Hostile Environment
13	Dense – High	Space suit in low altitudes
14	Thin – Low	Breather with air supplies at high altitudes; no protective equipment necessary at low altitudes
15+	Unusual	Varies

HYDROGRAPHICS DMS

CONDITION	DM
Size 0 or 1	Hydrographics must be 0
Atmosphere 0, 1, A, B, or C	DM-4
Atmosphere E	DM-2

POPULATION DMS

CONDITION	DM
Unbreathable Atmosphere	DM-2
Standard Atmosphere	DM+3
Standard, Tainted Atmosphere	DM+1
Thin or Dense Atmosphere	DM+1
Hydrographics 0 and Very Thin or lesser Atmosphere	DM-1

WORLD GOVERNMENT

ROLL	GOVERNMENT
0 -	None
1	Corporation
2	Participatory Democracy
3	Self-Perpetuating Oligarchy
4	Representative Democracy
5	Technocracy
6	Captive Government
7	Balkanized
8	Civil Service Bureaucracy
9	Impersonal Bureaucracy
10	Charismatic Dictator
11	Non-Charismatic Dictator
12	Charismatic Oligarchy
13	Religious Dictatorship
14	Religious Autocracy
15 +	Totalitarian Oligarchy

LAW LEVEL	
ROLL	COMMONLY FORBIDDEN WEAPONS
0-	Lawless. All weapons allowed. Candidate for Amber Zone status.
1	Poison gas, explosives, undetectable weapons, weapons of mass destruction
2	Portable energy weapons (unless mounted on ships)
3	Heavy Weapons
4	All automatic weapons
5	Personal concealed weapons
6	All firearms except for shotguns and stunners. Carrying weapons is discouraged.
7	Shotguns.
8	All bladed weapons, stunners.
9	Any weapons outside one's residence. Candidate for Amber Zone status.
10+	Highly restrictive government. All weapons are forbidden. Candidate for Amber Zone status.

Tainted: an otherwise breathable atmosphere, except that it contains some elements harmful to humans. Breathing this atmosphere without a breather-mask causes 1D damage every 10 minutes.

Very Thin: low air pressure; humans require a Breather to condense the atmosphere to a breathable pressure. A very thin – tainted atmosphere uses both the breather's condenser function and filtration function.

Thin: low-pressure breathable atmosphere. Requires no protection gear but will be unpleasant for humans who are unused to the thin air.

Standard: Terra-like atmospheric pressure and composition. Best environment for humans.

Dense: high-pressure breathable atmosphere. Requires no protection gear but will be unpleasant for humans unused to the atmosphere.

Exotic: unbreathable by humans but otherwise harmless to them. Humans require an air supply to survive in Exotic atmospheres.

Corrosive: this atmosphere causes 1D damage per round to unprotected characters. Will breach a space suit in 2D hours.

Insidious: as Corrosive, but powerful enough to breach a space suit within 1Dx10 minutes. A Hostile Environment Space Suit provides protection against Insidious atmospheres for 2D hours.

Dense - High: thick N2/O2 atmosphere with deadly pressure at ground level; atmosphere is breathable and habitable at high altitude, such as on tall mountains. At lower altitudes, the pressure causes 1D damage per round to unprotected characters.

Thin - Low: a thin atmosphere that is only breathable at low altitudes, where higher atmospheric pressure can support unprotected human life. At higher altitudes, treat as a Very Thin atmosphere.

Unusual: left to the Referee's discretion.

HYDROGRAPHICS

Throw 2D-7 and add the world's size roll to determine the world's Hydrographic rating. The following DMs apply. A planet's Hydrographic rating cannot be below 0 or exceed 10. Multiply the rolled value by ten to determine the percentage of the world's surface that is covered by water. For example, a planet with a Hydrographics rating of 2 would have 20% of its surface covered by water.

POPULATION

Throw 2D-2 to determine the world's Population rating. This represents the order of magnitude of the world's population. For example, Population 3 is thousands of inhabitants, Population 7 is tens of millions, and Population 9 is billions of inhabitants. The maximum Population is 10 (tens of billions of inhabitants) per world, except for extreme cases at the Referee's discretion.

STARPORT TABLE						
ROLL	CLASS	DESCRIPTION	BEST FUEL	ANNUAL MAINT.	SHIPYARD	POSSIBLE BASES
2-	X	No Starport	None	No	None	None
3-4	E	Frontier	None	No	None	None
5-6	D	Poor	Unrefined	No	None	Scout
7-8	C	Routine	Unrefined	No	Can perform reasonable repairs	Scout
9-10	B	Good	Refined	Yes	Can construct non-jump-capable craft	Naval, Scout
11+	A	Excellent	Refined	Yes	Can construct starships	Naval, Scout

GOVERNMENT

Throw 2D-7 and add the world's population rating to determine its Government type, as described below. Worlds with a Population rating of 0 have no Government.

None: no government. Small family or loose clan structure if there is any population at all.

Corporation: rule by a corporation or other commercial enterprise.

Participatory Democracy: direct democratic rule by the entire population.

Self-Perpetuating Oligarchy: a small, self-contained group of people are in control.

Representative Democracy: republican rule by elected officials.

Technocracy: rule by unelected experts and professionals.

Captive Government: the government on the world answers to an external authority.

Balkanized: several governments and cultures exist on the same world. 21st century Terra is an example.

Civil Service Bureaucracy: government by agents selected for their relative competence.

Impersonal Bureaucracy: government by complex agencies insulated from the population.

Charismatic Dictatorship: governed by a single leader who enjoys popular support.

Non-Charismatic Dictatorship: governed by a single ruler who lacks popular support.

Charismatic Oligarchy: rule by a select group or organization enjoying popular support.

Religious Dictatorship: governed by a religious organization.

Religious Autocracy: rule by a single religious leader.

Totalitarian Oligarchy: governed by a clique controlling every facet of the population's lives.

LAW LEVEL

Throw 2D-7 plus the Government rating to determine the world's Law Level, as described below. This represents how strict the world's laws are and how stringently and widely they are enforced. If the world's Government rating is 0, then its Law Level is also 0. The Law Level should never be less than 0 or greater than 10. Note that worlds that lack a population also lack a Law Level.

STARPORT

Most inhabited worlds have starports which greatly facilitate travel and interstellar commerce. Many worlds will have more than one starport, but only the best starport is usually listed. Throw 2D-7 plus the world's Population rating to determine the Starport Class, as detailed below. Worlds without a population will lack a starport unless the Referee chooses to place one as part of the setting.

Class A starports comprise the finest and most extensive interstellar infrastructure there is. These

TECH LEVEL DMS TABLE

RATING	STARPORT	SIZE	ATMOSPHERE	HYDRO.	POPULATION	GOV.
0		+2	+1	+1		+1
1		+2	+1		+1	
2		+1	+1		+1	
3		+1	+1		+1	
4		+1			+1	
5					+1	+1
6						
7						+2
8						
9				+1	+1	
10	A: +6		+1	+2	+2	
11	B: +4		+1		+3	
12	C: +2		+1		+4	
13			+1			-2
14			+1			-2
15			+1			
	X: -4					

ports have the best of everything: vast construction yards capable of manufacturing and repairing all types of starships, docking facilities for nearly any size of vessel, and amenities for travelers, traders, and crew alike. Class A ports always have extensive orbital facilities. Naval bases and occasionally Research and Scout bases may also be present.

Class B starports are good quality ports with construction facilities capable of manufacturing system ships. Additionally, these facilities can perform annual maintenance on starships. Class-B starports almost always have an orbital facility associated with them. They are well-equipped for handling interstellar trade and shipping. Naval, Research, and Scout bases may be present.

Class C starports are the 'standard' starport. They have reasonably good ground facilities and may have an orbital port depending on the volume of trade present. Class-C ports can perform most repairs on starships, but they do not have significant construction capability. Scout or Research bases may be present.

Class D starports have minimal landing facilities, and no orbital facilities. There are usually a few buildings, but no significant structures supporting visiting ships. Scout bases may be present.

Class E starports are very primitive: they are little more than a designated clear area and a marker beacon. If the tech level supports it, there may be landing lights.

Class X starports are not starports. There are no facilities, and no designated landing spots. Any visitors to the world must determine their own safe landing area.

A NOTE ON ORBITAL FACILITIES

Class A, B, and sometimes C starports include both ground and orbital facilities, with regular shuttle service between them. This allows ships with Standard or Distributed hull configurations to use the starport. Class D and E starports lack orbital facilities. Class X starports are not actually facilities.

TECH LEVEL

Throw 1D, modified by all applicable DMs, to determine the world's Tech Level, as discussed in the Equipment chapter. A world's Tech Level cannot be below 0. On a world that enjoys significant interstellar trade, the Tech Level denotes local manufacturing capacity, but higher TL gear should be available at double cost. On isolated worlds, the lack of interstellar trade means that nearly all technology present on the world will conform to the world's Tech Level. The DMs below can end up generating some high Tech Levels. It is strongly recommended that the Referee limit the maximum TL possible; usually TL 15.

Note that worlds with no Population also lack a Tech Level.

Humans and human-like aliens require a minimal technological level to live on certain worlds. If a world's Tech Level is below the minimum required for survival on that world, increase it to the minimum value.

MINIMUM TL TABLE

CONDITIONS	MINIMUM TL
Hydrographics 0 or 10, and Population 6 or higher	4
Atmosphere 4, 7, or 9. (Thin-Tainted, Tainted, or Dense Tainted)	5
Atmosphere 3- (Very Thin or less), or 10, 11, 12, 15 (Exotic, Corrosive, Insidious, or Unusual)	7

TRADE CODES

Use the following table to determine the world's Trade Codes from the world's characteristics. The Trade Codes are important for generating Purchase and Sale prices as used in the Speculative Trade chapter. If a planet fulfills all the characteristics listed in a row below, then it gains the Trade Code for that row. Apply all Trade Codes for which the world qualifies. For example, a planet with Atmosphere 5, Hydrosphere 7 and Population 4 would not gain the Agricultural Trade Code (it would need a population between 5 and 7) but would gain the Garden and Non-Industrial trade codes.

Agricultural: a world with an environment fit for large-scale agricultural production. Agricultural worlds require Thin, Standard, or Dense Atmospheres, Tainted or not, Hydrographics of 40% to 80%, and populations between the hundreds of thousands and tens of millions.

Asteroid: an asteroid belt devoid of life but rich in minerals. Asteroids require Size of 0.

Barren: an uninhabited world with Population 0.

Desert: a world with a significant atmosphere but no surface water. Desert worlds have an Atmosphere of Very Thin or denser, including Tainted version, and Hydrographics of 0%.

Fluid Oceans: a world with seas of liquids other than water, such as methane or more complex hydrocarbons. Fluid Ocean worlds have an Atmosphere of Exotic or worse, and Hydrographics of 10% or higher.

Garden: a perfect world for Terran (or similar) life. This world is populated enough for agricultural production, but with a population small enough to avoid significant ecological disruption. Garden worlds have breathable Thin, Standard, or Dense Atmospheres, 40% to 90% Hydrographics, and Populations ranging from the tens of thousands to the hundreds of millions.

High Population: a world with a Population of billions (or more!) of residents.

High Technology: an advanced world capable of interstellar-era technology. A world with a Tech Level of 12 or higher.

Ice-Capped: a world where surface water exists as ice deposits, usually near the poles. Ice-Capped worlds have an Atmosphere of Trace or None and Hydrographics of 10% or more.

Industrial: a world dedicated to massive-scale industrial production, often at the expense of the environment. Industrial worlds have an Atmosphere of None, Trace, or Tainted and Populations of billions or more residents.

Low Population: an outpost or other sparsely populated world. The world has a Population of a thousand or fewer people.

Low Technology: a primitive world with pre-industrial technology. These worlds have a Tech Level of 3 or less.

Non-agricultural: a world incapable of feeding its population by regular agriculture. Societies here may use synthetic food, hydroponics, and other techno-agricultural methods, but the people usually rely heavily on agricultural imports. Non-Agricultural worlds must have an Atmosphere of Very Thin or less, Hydrographics of 30% or less, and a Population of millions or more.

Non-industrial: a world lacking a significant industrial base. Non-Industrial worlds must have a Population between ten thousand and a million people.

Poor: a marginally habitable world. Poor worlds have an Atmosphere between Very Thin and Thin, including Tainted versions, as well as having Hydrographics of 30% or less.

Rich: a comfortable world with a breathable atmosphere and no overcrowding. Rich worlds have an Atmosphere of Standard or Dense—never Tainted—and a population between one million and one hundred million people.

Water world: a world completely or almost completely covered by water. Water worlds have Hydrographics of 100%

Vacuum: a world with no atmosphere. Vacuum worlds are larger than 1600 km and have no Atmosphere.

BASES

Some systems have naval or scout bases. Others are pirate havens. Bases can help establish the subsector's politics. For example, naval bases tend to appear along borders or on important core worlds, while scout bases are established near borders or on an open frontier. While the method below generates random bases, we strongly suggest the Referee might also place their own bases according to their vision of the setting.

TRADE CODES TABLE

CLASSIFICATION	CODE	SIZE	ATMO.	HYDRO.	POP.	TL
Agricultural	Ag		4-9	4-8	5-7	
Asteroid	As	0	0	0		
Barren	Ba				0	
Desert	De		2+	0		
Non-Water Fluid Oceans	Fl		A+	1+		
Garden	Ga		5, 6, 8	4-9	4-8	
High Population	Hi				9+	
High Technology	Ht					C+
Ice-Capped	Ic		0-1	1+		
Industrial	In		0-2, 4, 7, 9		9+	
Low Population	Lo				1-3	
Low Technology	Lt					5-
Non-Agricultural	Na		0-3	0-3	6+	
Non-Industrial	Ni				4-6	
Poor	Po		2-5	0-3		
Rich	Ri		6, 8		6-8	
Water World	Wa			A		
Vacuum	Va		0			

BASE CODE TABLE	
BASES	CODE
Naval Base	N
Pirate Base	P
Research Base	R
Scout Base	S

A Naval Base is a military base or depot serving an interstellar navy. Naval craft can refuel and resupply at a naval base. On an independent world, a Naval Base indicates significant local naval might. Naval bases exist on worlds with Class A or Class B starports on a throw of 8+.

A Research Base is a facility dedicated to expanding the boundaries of known science. Corporations or governments often establish research stations to study interesting phenomenon. Often these bases are placed on out-of-the-way worlds to avoid prying eyes, or to contain the damage if something goes wrong. Research bases are present in systems with Class A, B, or C starports on a 2D roll of 10+; DM-2 for Class A starports.

A Scout Base is an exploration and communications outpost operated by a scout service. A scout base on an independent world represents well-organized exploration capabilities and efforts. Scout bases exist on worlds with starport Class D or better on a throw of 7+; DM-1 for a Class C starport, DM-2 for Class B starport, and DM-3 for Class A starport. Player characters with detached-duty Scout Ships can obtain fuel and repairs for free at scout bases.

A Pirate Base harbors raiders, corsairs, and other criminals. This is usually a small independent bandit hideout, but sometimes governments tolerate the existence of such bases to encourage raids against enemy shipping. A pirate base exists in a system without a naval base or a Class-A starport on a throw of 12+.

The following table lists shorthand codes for bases present in a star-system.

TRAVEL ZONES

Most worlds are nominally civilized, though dangers can still lurk even on the safest core world. However, some worlds are far more dangerous than most. Interstellar organizations such as the Navy, the Scout Service, and the Explorers' Society issue travel warnings regarding these treacherous worlds. Such warnings take the form of travel zones.

A world marked as an **Amber Zone** is unsafe for off-worlders. It might have a hostile environment or a particularly dangerous government; it might be experiencing a period of instability and strife. It could be run by criminals or could be filled with dangerous xenofauna. The Referee should mark worlds as Amber Zones if they have dangerous atmospheres (Corrosive or worse); unstable governments 0, 7, or 10 or higher; or a law level of 0 or 9+. The Referee may also designate worlds as Amber Zones for other reasons.

A **Red Zone** world is deemed so dangerous it is forbidden for non-military vessels to visit. The navy interdicts such worlds to prevent unauthorized landings. Marking worlds as Red Zones is left entirely up to the Referee's discretion. The Referee should usually use this designation sparingly.

ALLEGIANCES

Depending on the setting, worlds may be independent, or may belong to a larger interstellar polity. Or it could be vacillating in its allegiances. Examples of interstellar states run the gamut from very loose confederations to mighty empires. The referee should mark the borders of such politics on the map, and note any sub-divisions (districts, provinces, duchies, etc.) within the borders.

COMMUNICATION AND TRADE ROUTES

Interstellar governments always try to establish lines of regular communication between their member worlds. As well, commercial activity will create regular trade routes that connect viable trading worlds in a given subsector. Such connections should encompass only some of the worlds in the subsector. There should also be some unconnected, less frequently visited worlds for characters to explore. The Referee should indicate Communication and Trade routes on the subsector map.

Communication Lines should connect any two worlds with Class A Starports, as well as Class B Starports, with any naval bases, using the shortest possible routes. These represent the main arteries of interstellar administration and naval activity. Thus, they enjoy highly frequent military and civilian courier and passenger services. Distances should not exceed the Jump capability of the highest TL world in the communication network.

Trade Routes represent strong and profitable commercial ties. There are a few criteria that two worlds need to meet to establish a Trade Route between them:

1. the pair of worlds have at least one Trade Tag that appears in the same rows of the following table;

2. the two worlds are within 4 hexes of each other;

and 3. it is possible to connect the two worlds by a series of Jump-1 or Jump-2 routes.

If the pair of worlds meets the above three criteria, then a trade route connects them. The Referee should mark any trade routes in the subsector on the map. The specific effects of a communication or trade route

are left to the Referee. However, systems connected by trade routes are usually high-traffic systems for the purposes of speculative trade.

TRADE ROUTES TABLE	
FIRST END POINT	SECOND END POINT
High Tech or Industrial	Asteroid, Desert, Ice-Capped, Non-Industrial
High Population or Rich	Agricultural, Garden, Water World

WORLD PRESENTATION

Once a world's characteristics have been developed, the following tabled format can be used. See Appendix B for an alternate way to present the world information called the Universal World Profile (UWP).

EXAMPLE OF WORLD CREATION

The Referee has rolled up the Valhalla subsector and is ready to create the world located in Hex 0305.

1. World Size: Rolling 2D-2: (8) – 2 = 6; the world is 9600km in diameter with a surface gravity of 0.7g.
2. Atmosphere: Rolling 2D-7 + Size: (2) – 7 + 6 (Size DM) = 1; the world has a Trace atmosphere.
3. Hydrographics: (DM-4 due to a Trace atmosphere) Rolling 2D-7 + 6 (Size DM) – 4 (Trace atmosphere DM): (12) – 7 + 6 – 4 = 7. The world has 70% water covering the surface.
4. Population: Rolling 2D-2: (5) – 2 = 3, the world has a population of a few thousand.
5. Government: Rolling 2D-7 + Population: (4) – 7 + 3 (Population DM) = 1; the world is governed by a corporation.
6. Law Level: Rolling 2D-7 + Government: (7) – 7 + 1 (Government DM) = 1; the world has a Law Level of 1, minimal law enforcement.
7. Starport: Rolling 2D-7 + Population: (7) – 7 + 3 (Population DM) = 3; the world has a Class-E starport.
8. Tech Level: Rolling 1D and applying all applicable DMs for the world: rolling a 6 + 1 (Atmosphere) +1 (Population) = 8. Since the world has a Trace atmosphere, the Referee verifies the world has the minimum required Tech Level (it does).
9. Trade Codes: The world qualifies for the following Trade Codes: Ice-Capped and Low Population.
10. Determine Bases. With a Class E starport, the world may have a Pirate Base: Rolling 2D: (8), the world does not have any pirate bases.
11. Apply any Allegiances, trade routes, communication lines etc. based on the setting. Once the Referee rolls up the remaining worlds in the Valhalla subsector, they can determine allegiances, trade routes, or communication lines.
12. Develop the world using everything above and your imagination. Looking at the world characteristics, the Referee decides to name the world Frostfang.

The description for Frostfang is

Frostfang, located in hex 0305 of the Valhalla subsector, has a diameter of 9600km and a surface gravity of 0.7g. The atmosphere is Trace. The surface is covered with 70% ice water. The world has a population of a few thousand citizens governed by a corporation. The government imposes a law level of 1, restricting weapons of mass destruction and not much else. The average technology is 8. Trade is supported by a Class-E starport and no bases. The world has the following trade codes: Ice Capped and Low Population. Frostfang is a small mining outpost operated by the Odinforge company. The company leaves the miners alone if they deliver their quota of Common and Uncommon Ores and the occasional crystals or gems.

UNIVERSAL WORLD PROFILE			
System Name	Map Hex	Gas Giant	Allegiance
[system name]	[map hex]	[is a gas giant present?]	[allegiance]
Diameter	Surface Gravity	Atmosphere	Hydrosphere
[diameter]	[surface gravity]	[atmosphere]	[hydrosphere]
Population	Government	Law Level	Technology
[population]	[government]	[law level]	[technology]
Starport	Bases	Trade Codes	
[starport]	[bases]	[trade codes]	

SOCIAL ENCOUNTERS

This chapter provides the Referee with tools to generate useful encounters with NPCs in a variety of social contexts. The intent is to assist the Referee in developing a sense of verisimilitude in their campaign world and increase variety in NPC interactions with the player characters. We divide this chapter into two main parts: the first part is a series of encounter tables for a variety of contexts, while the second consists of tables and generators to help Referees make their NPCs more useful, motivated, and colorful.

ENCOUNTER TYPES

There are 5 basic types of encounters: Routine, Legal, Random, Patron, and Animal.

Routine Encounters: these represent ordinary day-to-day encounters with people performing their routine jobs: technicians in starports, clerks in stores, and bartenders in saloons. The Referee should not be overly concerned with checking for routine encounters, as common sense will dictate whether or not a starport bar will have a bartender and a server or two (it will). Instead, the Referee should use the NPC Reaction Table as well as the One-Roll tables presented below to provide color to any routine encounter.

Legal Encounters: these are a specific kind of random encounter where one or more player characters interact with law enforcement officials. Depending on what the PCs are up to, the society's government type, and the NPC Reaction Roll result, legal encounters can run the gamut from minor inconveniences, downright harrowing, to the full evening's adventure if things go horribly wrong. The higher the world's Law Level, the more characters can expect to be bothered by local law enforcement.

The Referee should throw 2D higher than the local Law Level once per day to avoid an encounter with local law enforcement.

Random Encounters: there are two main benefits to incorporating random encounters into any gaming session. The first is that it is possible to use random encounters to dynamically generate an evening's adventure. This is especially useful when the Referee knows where the player characters are intending to go and what they are intending to do—**by asking what the players intend to do in the next session**—and preparing random encounters beforehand. This may seem somewhat disingenuous. After all, aren't random encounters supposed to occur randomly during play? This is possible, but it means that the Referee will be forced to work on the fly to generate a random encounter. Usually, this limits the number of random encounters the PCs will interact with to a maximum of one. This works against the second benefit of incorporating randomly generated encounters, which is to establish a sense of verisimilitude: the feeling that the game world exists beyond the characters' experiences and actions. If players know they will have one random encounter in an evening, they may not even wish to interact with the randomly generated NPC. However, if they encounter a fully formed randomly generated NPC, they will be much more interested in engaging with the character.

The Referee should roll 1D per day. A 5 or 6 indicates that a random encounter occurs. Referees can use the tables in this chapter to determine what sort of NPC is encountered, or they can develop their own random encounter tables for specific settings. We have provided a few sample random encounter tables to choose from.

Patron Encounters: patrons are those valuable NPCs that provide tools, money, or other support to player characters. Referees are encouraged to use patrons as a means to engage PCs in adventures. Typically, the patron represents the hook that is the basis of the adventure and provides the reward at the end of it—if the player characters were successful, of course.

The Referee should roll 1D once per week. On a 5 or 6, the player characters have randomly encountered a patron. Referees should feel free to use the NPC generation tables below to develop the patron further. Make this roll in addition to whenever player characters use skills like Liaison or Carouse (among others) to locate patrons themselves.

Animal Encounters: The Referee should roll 1D for animal encounters in the wilderness: once per day, and once per night. On a result of 1, the PCs have encountered an animal. Referees can increase or decrease the chances of an animal encounter based on the terrain type and other environmental considerations. The rules for generating creatures are in the Xenofauna Encounters chapter. Xenofauna encounter frequency depends on the ecosystem in question, but in a relatively teeming ecosystem, an encounter occurs on a result of 1 on 1D, rolled once per day and once per night of wilderness travel.

NPC REACTION ROLL

The table below includes standard NPC Reactions on a 2D roll. As well, we have included some examples of likely attitudes and actions for each Reaction result to help as Referee prompts. Remember to use common sense and interpret the NPC Reaction roll in the context of the specific encounter. The NPC Reaction roll should drive much of the initial interaction between the PCs and the encounter. GMs are encouraged to use the NPC

NPC REACTION TABLE			
2D	RESULT	ATTITUDE	POSSIBLE ACTIONS
2	Hostile	The NPC will immediately attack (roll Morale), or actively spoil whatever plans the PCs have.	Attack, interfere, escape, flee. Whatever the PCs are doing, this NPC is against it. If the PCs are obviously more powerful, the NPC will leave.
3-5	Unfriendly	The NPC will do anything short of outright hostile action. They are unhelpful and untrustworthy.	Avoid, insult, lie, misdirect, mislead, waste time. The NPC is unwilling to resort to direct action.
6-8	Indifferent	The NPC is uninterested in helping or hindering the PCs.	Any socially acceptable neutral action. The NPC will act in a socially predictable or wary manner.
9-11	Friendly	The NPC is cooperative and friendly.	Chat, offer limited help, give information. The NPC will not act against the PCs.
12	Helpful	The NPC is interested in helping or cooperating with the PCs fully.	Heal, aid, support. The NPC will join the PCs' cause with very little convincing.

Reaction Roll to differentiate between otherwise similar encounter results and keep the players guessing.

DETAILING NPCS

What follows are a number of tables to assist Referees in developing NPCs and providing them with memorable traits that will help everyone in the game remember specific NPCs and interact with them more effectively. The goal of these random tables is not to supplant Referee creativity, but to inspire Referees who might otherwise be stuck for a new NPC, or who may have fallen into a rut without realizing it.

When using one-roll tables, take a handle of D6s and roll them to get some random surprises about your NPCs. Then interpret the results of the tables accordingly.

PATRON TABLES

Patrons are usually central figures in a GM's adventure. It is important to make them unique, so that the players easily remember them. If possible, GMs should do their best to take on the verbal or physical mannerism that the tables here mention. As well, the patron's motivations, especially towards the PCs, are very useful to have beforehand.

BUSINESS CONTACT TABLES

Sometimes speculative trading goes smoothly. Other times, adventures happen. Referees can use the following tables to generate an NPC supplier, buyer, or broker. Simply pick up a handful of dice, roll them all, and develop a business contact to interact with or otherwise antagonize the player characters.

These NPCs are basic templates for Referees to use when necessary. Don't hesitate to add additional skills if an NPC does not have the skill and the Referee thinks they should.

RANDOM ENCOUNTERS AT A BAZAAR				
D66	ENCOUNTER		D66	ENCOUNTER
11	Space Salvage Merchant		41	Used Vehicle Salesperson
12	Spice Trader		42	Noble with Retinue
13	Ship Crew		43	Dissident on Soapbox
14	Caravan Leader		44	Reporter
15	Local Law Enforcement		45	Potential Patron (Roll on table)
16	Food Truck/Stand		46	Sandwich Board Person
21	Unsupervised Children		51	Farmer
22	Researcher		52	Doctor
23	Urchin		53	Technician
24	Attorney		54	Criminal (Roll on table)
25	Mercenary		55	Government Inspector
26	Arms Dealer		56	Tax Collector
31	Street Performers		61	Snake Oil Merchant
32	Unusual Alien		62	Grocer
33	Rowdy Youth		63	Drunk Stumbling to or from Saloon
34	Street Preacher Looking for Converts		64	Corporate Rep
35	Bored Food Stand Worker		65	Diplomat
36	Pirated Music Merchant		66	Freelance Broker

RANDOM SOCIAL ENCOUNTER: HIGH SOCIETY				
D66	ENCOUNTER		D66	ENCOUNTER
11	Diplomat		41	Celebrity Entertainer or Artist
12	Judge		42	Senior Entertainment Agent
13	Noble		43	Entertainment Critic
14	Government Minister		44	Venue Owner
15	Civil Service Operator		45	Film Producer or other Patron of the Arts
16	Political Leadership		46	Notorious Mistress
21	Senior Military Officer		51	University Administrator
22	Middle/Junior Rank Military Officer		52	Senior Faculty
23	Intelligence Agency Administrator		53	Visiting Foreign Academic
24	Defense Industry Magnate		54	Revered Academic Genius
25	Police Chief or Commissar		55	Grant and Funding Administrator
26	Military Scientist		56	Famous Journalist
31	Local Business Magnate		61	Rakish Dilettante
32	Corporate Financier		62	Spymaster
33	Shipping Magnate		63	Exiled Noble/Pretender to a Throne
34	Important Trade Broker		64	Psychic Academy Headmaster
35	Senior Law Firm Partner		65	High Priest or Other Religious Leader
36	Industrial Researcher		66	Head of State

RANDOM COMMON PEOPLE				
D66	ENCOUNTER		D66	ENCOUNTER
11	Disgraced Noble Drifter		41	Retired Sergeant
12	Shop Clerk		42	Local Priest
13	Poor Immigrant		43	Itinerant Peddler
14	Orphaned Street Urchin		44	Minor Local Government Official
15	Actress		45	Exhausted Nurse
16	Struggling Actor		46	Neighborhood Doctor
21	Common Spacer		51	Nosey Matchmaker
22	Toothless Beggar		52	Ambitious Merchant
23	Line Cook		53	Stout Farmer
24	Manual Laborer		54	Tourist
25	Factory Worker		55	Journeyman Technician
26	Loan Shark		56	Underground Artist
31	Delivery Driver		61	Offworld Missionary
32	Off-Duty Soldier		62	Criminal Goon
33	Homemaker		63	Union Organizer
34	Servant on Errands		64	Local Beat Cop
35	Apprentice Technician		65	Office Drone
36	Threadbare Professor		66	Petty Thief

RANDOM CRIMINAL ENCOUNTERS				
D66	ENCOUNTER		D66	ENCOUNTER
11	Drug Dealer		41	Corrupt Cop
12	Gang Lookout		42	Bounty Hunter
13	Gang Members		43	Crime Syndicate Rep
14	Prostitute (if prostitution is illegal)		44	Petty Thief
15	Pimp or Madame		45	Terrorist Operative
16	Thug		46	Organ Harvester
21	Operator		51	Black Market Broker
22	Fence		52	Syndicate Accountant
23	Hitman		53	Drug Trafficker
24	Scout		54	Drug Manufacturer
25	Courier		55	Con Artist
26	Slave Merchant		56	Burglar
31	Human Trafficker		61	Hacker
32	Smuggler		62	Forger
33	Black Market Merchant		63	Unscrupulous Defense Attorney
34	Pirate Crew		64	White Collar Criminal
35	Shakedown/Extortion Crew		65	Rogue Spy
36	Drifter		66	Serial Killer

RANDOM PATRON ENCOUNTERS				
D66	ENCOUNTER		D66	ENCOUNTER
11	Government Official		41	Antiquities Collector
12	Financier		42	Art Thief
13	Well-Connected Broker		43	Con Artist
14	Planetary Bureaucrat		44	Smuggler
15	Off-world Diplomat		45	Rich Noble
16	Corporate Executive		46	Disgraced Archaeologist
21	Eccentric Researcher		51	Espionage Agent
22	Starship Engineer		52	Information Broker
23	Corporate R&D Specialist		53	Black Marketeer
24	Investigative Journalist		54	Crime Syndicate Boss
25	Medical Doctor		55	Crusading Moralist
26	University Professor		56	Religious Leader
31	Tough Belter		61	Scout/Courier
32	Free Trader Captain		62	Insurance Assessor
33	Explorer/Surveyor		63	Disgraced Noble
34	Frontier Colonist		64	Conspiracy Member
35	Naval Officer		65	Bored Dilettante
36	Mercenary Captain		66	Alien Diplomat

NPCS PROBLEM TABLE		
1D	1D	WHAT IS THIS NPC'S PROBLEM?
1-3	1	Has enemies at work
	2	Is being blackmailed
	3	Drug or alcohol addiction
	4	Adheres to the wrong religion, or is a heretic
	5	Is afflicted with a chronic illness
	6	Hounded by debt collectors
4-6	1	Has a horrible secret
	2	Romantic overtures have failed
	3	Overly ambitious beyond their capabilities
	4	Their job or position is being threatened
	5	Their spouse is being unfaithful
	6	Utterly incompetent in their given field and knows it

NPCS MOTIVATION TABLE		
1D	1D	WHAT IS THIS NPC'S PROBLEM?
1-3	1	Lust or Desire
	2	Unspeakably evil appetites
	3	Idealism
	4	Wishes to please others
	5	Religious obligations
	6	They need money
4-6	1	Fame and glory
	2	Desire to lead others
	3	Murderous Hatred
	4	Well-defined burning revenge
	5	Help their friends
	6	They want answers

PHYSICAL BUILD			
1D	GENERAL NPC PHYSICAL BUILD		
1	Short, slender, or frail	4	Out of shape, soft, or voluptuous
2	Stocky, compact, or small	5	Built, Bulky, or Large
3	Average height and weight	6	Tall, lanky, or boney

NOTABLE CHARACTERISTICS TABLE			
D66	THEIR MOST NOTABLE CHARACTERISTIC	D66	THEIR MOST NOTABLE CHARACTERISTIC
11	Cannot sit still	41	Drunkard or drug addict
12	Waxes nihilistic about existence	42	Profoundly ugly
13	Terrible taste in clothing	43	Exceptionally quiet and soft-spoken
14	Missing limb or physical deformity	44	Brave: a good person to have by your side
15	Stutters	45	Suffers from a chronic illness
16	Unusual accent	46	Visible scarring
21	Very neat and well-kept	51	Refers to themselves in the third person
22	Slovenly dressed	52	Incredibly attractive
23	Aggressive demeanor	53	Missing an eye
24	Mumbles asides to themselves	54	Ill-mannered and brusque
25	Carries many religious symbols	55	Has a very quick temper
26	Wears thick glasses	56	Extremely polite
31	Easily confused or forgetful	61	Openly racist and bigoted
32	Perpetually distracted by datapads	62	Madly in love with someone
33	Chronic and deep cough	63	A craven coward
34	Conspiracy monger	64	Even greedier than the average businessman
35	Carries themselves very stiffly	65	Devoted to a noble, if doomed, cause
36	Very old or young for their position	66	Ends all statements in the form of a question?

PATRON: TRUSTWORTHINESS			
1D	PATRON: TRUSTWORTHINESS		
1	They intend to completely screw over the PCs.	4	They'll pay without any problems.
2	They intend to pay but will deduct unforeseen expenses and any shortcomings from the PCs.	5	They'll pay more than was originally bargained for.
3	They'll hold up their end of the deal, but only if forced to.	6	They'll pay generously and will give bonuses for good performances.

PATRON: WHY DID THEY HIRE THE PCS?			
1D	PATRON: WHY DID THEY HIRE THE PCS		
1	They needed an outside third party to avoid local political complications.	4	The patron is pressed for time and the PCs were available.
2	The PCs' reputation preceded them.	5	The patron needed anyone—the job is a diversion.
3	The patron has an unsavory reputation and no one else will work for them.	6	The patron has a particular interest in this group…

PATRON: WHAT IS THE PATRON'S MOST IMPORTANT ASSET OR CAPABILITY?		
1D	1D	PATRON: WHAT IS THIS NPC'S CAPABILITY?
1-3	1	Contacts: the patron is well-connected and can put the PCs in touch with others.
	2	Extended Family or Clan: blood ties are usually trustworthy…
	3	Profession: the patron's career or occupation provides tools and skills.
	4	Money: financial resources that can make any problem less demanding.
	5	Information: leverage, intelligence, blackmail, knowledge is power for this patron.
	6	Force: a personal army, heavy weapons, or just the will to use extreme force.
4-6	1	Society: the patron's position in society grants them power.
	2	Starships: the patron can put one or more ships at the PCs' disposal.
	3	Moral Leverage: the patron has sympathetic allies
	4	Influential: this patron has social influence over many people
	5	Debt: the patron has many people in his or her financial or moral debt
	6	Unique: artifacts, psychic powers, or other strange, rare abilities give the patron power

PATRON: WHAT IS THE BASIC GOAL OF THE JOB?		
1D	1D	PATRON: WHAT IS THE GOAL OF THE JOB?
1-3	1	Assassinate a target
	2	Steal from a target
	3	Retrieve data from a secure location
	4	Discredit a target
	5	Retrieve plunder
	6	Establish a base of operations
4-6	1	Sabotage a target
	2	Transport goods or a person: quickly, secretly, or securely, pick two.
	3	Depose a local authority
	4	Investigate a crime
	5	Investigate a target
	6	Explore a location

BUSINESS CONTACT: TRUSTWORTHINESS			
1D	BUSINESS CONTACT: TRUSTWORTHINESS		
1	They intend to completely screw over the PCs.	4	They'll pay without any problems.
2	They intend to pay but will deduct unforeseen expenses and any shortcomings from the PCs.	5	They'll pay more than was originally bargained for.
3	They'll hold up their end of the deal, but only if forced to.	6	They'll pay generously and will give bonuses for good performances.

BUSINESS CONTACT: WHY DID THEY WANT TO MAKE THE DEAL?			
1D	BUSINESS CONTACT: WHY DID THEY WANT TO MAKE THE DEAL?		
1	They need cash to pay off debts/they need the goods - immediately	4	Their creditors insist that they make the transaction
2	They want to corner the market on the good	5	They are under pressure from the government
3	They have an inside scoop on supply or demand for the good	6	They have a line on another deal, and need to make some cash

BUSINESS CONTACT: WHO IS THEIR MOST IMPORTANT ALLY?		
1D	1D	BUSINESS CONTACT: WHO IS THEIR MOST IMPORTANT ALLY?
1-3	1	An old war veteran buddy
	2	Local law enforcement agent
	3	A government bureaucrat who has been thoroughly bribed
	4	The local shakedown gang
	5	The Planetary Chamber of Commerce
	6	A priest known for humility and charity
4-6	1	A starport customs inspector
	2	A crime boss
	3	A union local leader with a large and muscular membership
	4	A hungry journalist for the local news media outlet
	5	Their lawyer who is on retainer
	6	The business they purchase most of their stock from

BUSINESS CONTACT: WHO IS THEIR MOST NOTORIOUS ENEMY?		
1D	1D	BUSINESS CONTACT: WHO IS THEIR MOST NOTORIOUS ENEMY?
1-3	1	A business rival with deep pockets and many friends
	2	A local gang running a protection racket
	3	A crime boss who has a stake in the business!
	4	A corrupt—or incorruptible—starport master
	5	The starport dockworker or technician union.
	6	The manufacturer of the good the merchant is trying to sell
4-6	1	A local police officer looking into illegal trade networks
	2	A government agent investigating tax evasion or other white-collar crime
	3	An aggressive creditor who has few reservations about getting their money back
	4	A jilted lover who knows all about their secret, shady deals
	5	A crusading investigative reporter exposing corruption
	6	A Vocal and forthright politician trymake a name for themselves

BUSINESS CONTACT: A RUMOR ABOUT THEM		
1D	1D	BUSINESS CONTACT: A RUMOR ABOUT THEM
1-3	1	They are utterly unable to pay their debts
	2	They have ties to the secret police
	3	Their business is a front for a larger criminal organization
	4	The trader is a member of a detestable cult
	5	They have psychic powers
	6	They killed the last trader who crossed them
4-6	1	They have a side business trading in drugs
	2	The local government has a mole in their business
	3	They secretly allied to anti-government revolutionaries
	4	They have truly detestable sexual proclivities
	5	They trade in slaves
	6	Their weakness is a very expensive addiction

RANDOM STARPORT ENCOUNTER TABLE				
D66	ENCOUNTER		D66	ENCOUNTER
11	Ship Arrives or Departs		41	Reporter
12	Patrolling Law Enforcement		42	Researcher
13	Maintenance Robot		43	Street Vendor
14	Pilgrims		44	Pirate Shorewatcher
15	Technicians		45	Thugs
16	Courier		46	Tourists
21	Belters		51	Interstellar Traders
22	Alien Starship Crew		52	Pickpocket
23	Fugitives		53	Mendicant Preacher
24	Government Official		54	Ship Crew on Shore Leave
25	Cleaning Crew		55	Passengers Looking for Ship
26	Local Performers		56	Street Food Vendor
31	Local Merchants		61	Drunk Crew
32	Military Personnel on Leave		62	Taxi Driver
33	Noble with Retinue		63	Cargo Loaders
34	Political Dissident		64	Starport Official
35	Potential Patron		65	Refugees
36	Public Demonstration		66	Broker

SAMPLE NPCS

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Petty Thug	9	8	7	6	4	4	16	8

Relevant Skills: Athletics 1, Gun Combat 1, Melee Combat 1, Stealth 1
Equipment: Pistol (2D), Stun Prod (2D), Leather Jacket (2)

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Gang Boss	8	9	10	8	8	5	22	11

Relevant Skills: Athletics 1, Melee Combat 1, Gun Combat 1, Leadership 1, Tactics 1, Streetwise 2
Equipment: Pistol (2d), Knife (1D), Cloth Armor (6)

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Guard	8	6	9	7	7	7	20	10

Relevant Skills: Athletics 1, Gun combat 1, Melee Combat 1
Equipment: Assault Rifle (3D), Cloth Armor (6), Comm

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Veteran Guard	7	7	10	8	8	7	20	10

Relevant Skills: Gun Combat 2, Melee Combat 1, Recon 2, Tactics 1
Equipment: Assault Rifle (3D), Cloth Armor (6), Comm

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Police Officer	7	9	7	8	8	7	14	7

Relevant Skills: Gun Combat 1, Investigate 1, Recon 1, Streetwise 1
Equipment: Stunner (3D), Pistol (2D), Cloth Armor (6), Comm

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Police Detective	7	7	8	10	10	9	16	8

Relevant Skills: Admin 1, Computers 1, Gun Combat 1, Investigate 2, Liaison 1, Recon 1, Streetwise 2
Equipment: Stunner (3D), Pistol (2D), Cloth Armor (6), Comm

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Technician	6	8	7	8	10	7	14	7

Relevant Skills: Computer 1, Driving 1, Repair 1
Equipment: Toolkit, Comm

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Spacer Crew	7	7	7	7	7	7	14	7

Relevant Skills: Computer 1, Engineering 1, Gunnery 1, Piloting 1, Repair 1, Zero-G 1
Equipment: Toolkit, Space Suit (6), Pistol (2D)

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Veteran Spacer	6	9	8	10	10	7	16	8

Relevant Skills: Computer 2, Engineering 2, Gunnery 1, Piloting 1, Repair 2, Zero-G 2
Equipment: Toolkit, Pistol (2D), Space Suit (6)

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Ship Officer	**7**	**9**	**7**	**8**	**10**	**10**	**14**	**7**

Relevant Skills: Computer 1, Leadership 2, Liaison 1, Melee Combat 1, Piloting 1, Tactics 2, Zero G 1
Equipment: Pistol (2d), Cutlass (3D), Comm, Space Suit (6)

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Belter	**7**	**7**	**9**	**7**	**7**	**4**	**18**	**9**

Relevant Skills: Carousing 1, Demolitions 1, Piloting 1, Repair 1, Science 1, Zero-G 1
Equipment: Blade (2D), Space Suit (6)

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Noble	**6**	**7**	**7**	**7**	**9**	**13**	**14**	**7**

Relevant Skills: Admin 1, Carousing 2, Liaison 1, Melee Combat 1
Equipment: Sword (3D), Comm, Cloth Armor (6)

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Diplomat	**6**	**7**	**6**	**10**	**13**	**14**	**12**	**6**

Relevant Skills: Admin 1, Carousing 1, Computers 1, Deception 2, Investigate 1, Liaison 2
Equipment: Stealth Pistol (2D), Comm, Cloth Armor (6)

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Journalist	**6**	**8**	**7**	**9**	**9**	**8**	**14**	**7**

Relevant Skills: Admin 1, Deception 1, Investigation 2, Liaison 1, Recon 1, Stealth 1, Streetwise 2
Equipment: Comm, Stealth Pistol (2D)

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Scientist	**5**	**7**	**7**	**12**	**13**	**7**	**14**	**7**

Relevant Skills: Admin 1, Computers 1, Engineering 1, Investigate 2, Medicine 1, Science 2
Equipment: Hand Computer, Comm

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Elite Bodyguard	**10**	**9**	**10**	**6**	**8**	**6**	**24**	**12**

Relevant Skills: Athletics 2, Gun Combat 3, Melee Combat 3, Recon 2
Equipment: Gauss Pistol (3D), Cloth Armor (6), Comm, Medkit, Subdermal Armor (3), Internal Blade (2D)

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Entertainer	**7**	**7**	**7**	**7**	**7**	**9**	**16**	**8**

Relevant Skills: Athletics 1, Carousing 2, Liaison 1
Equipment: Comm

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Free Trader	**6**	**7**	**7**	**9**	**8**	**7**	**14**	**7**

Relevant Skills: Admin 1, Liaison 2, Piloting 1, Repair 1, Streetwise 1
Equipment: Comm, Free Trader starship

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Local Guide	**8**	**8**	**10**	**7**	**5**	**3**	**20**	**10**

Relevant Skills: Driving 1, Gun Combat 1, Melee Combat 1, Recon 1, Survival 1
Equipment: Rifle (3D), Blade (2D)

CHARACTER	STR	DEX	END	INT	EDU	SOC	LIFEBLOOD	STAMINA
Mercenary Gunman	**9**	**9**	**10**	**8**	**8**	**6**	**20**	**10**

Relevant Skills: Carouse 1, Gun Combat 2, Heavy Weapons 2, Melee Combat 2, Recon 1, Stealth 1
Equipment: Pulse Rifle (3D), Encased Armor (9), Comm, Blade (2D), Grenades, Cybereye (TL9 with Low-Light)

XENOFAUNA ENCOUNTERS

Many worlds bear life, and this creates ecosystems, food chains, and the creatures that populate them. Interstellar visitors entering such alien ecosystems encounter xenofauna – alien animals. The latter respond in a manner dictated by their instincts, from flight, to indifference, to trying to eat the hapless adventurer.

Alien beasts vary greatly; however, basic ecological functions show great similarity between worlds. There are four basic categories of animals, based on diet: herbivore, omnivore, carnivore, and scavenger. Each category has sub-categories depending on how the animal gets its food. The following animal generation system creates alien animals based on their ecological function, rather than their form. The animal's exact form is up to the referee.

We encourage the Referee to be creative and modify animals they might already know about, as they see fit. For example, poison and venom are common in the natural world here on Terra and would most likely be common on other worlds; the Referee may give an animal a venom based on the poison rules later in this chapter. More radical variations of known creatures are also possible and encouraged. For example, the referee may devise a predator hunting by spitting thorns at its prey at high speed. In this case, they may decide that the animal's attack will resemble a rifle. Psionic animals are also a possibility. Do not let the tables restrict you – they are merely tools to provide a baseline.

ANIMAL GENERATION PROCESS

Follow these steps to generate xenofauna.

1. Choose the animal's habitat terrain and roll for its movement type.
2. Determine the animal's ecological niche and subtype.
3. Determine size, stamina, lifeblood, and damage.
4. Determine weapons, armor, and base speed.

TERRAIN AND ECOSYSTEM

Terrain and the local ecosystem affect the types of creatures inhabiting them. Use the following table to determine the animal's mode of locomotion. The result provides DMs for later tables based on terrain. Roll 1D and consult the Terrain and Movement Table for the animal's method of movement: A for Amphibious, F for Flying, S for Swimming, and W for Walking. The numbers following the movement type are further DMs to the animal's size.

ANIMAL'S NICHE AND SUBTYPE

Choose one ecological niche for the animal, as desired or as required by an encounter table. The niches are Carnivore, Herbivore, Omnivore, or Scavenger. Throw 2D on the Animal Subtypes Table to determine the animal's subtype. Subtypes also determine the creature's speed, as detailed later in this chapter. The numbers in parentheses are the numbers of animals encountered per pack (or random encounter). If there is no number, only a single creature appears. Examples of Terran animals of a subtype appear in parentheses.

Carrion-Eater (vulture): scavengers who wait for all other threats to disperse before eating. Gain DM+1 to surprise rolls.

Chaser (wolf): carnivores who chase and exhaust their prey.

Eater (army ant): omnivores who eat anything they encounter, including adventurers.

Filter (earthworm): herbivores who pass the environment through their bodies and draw essential nutrients from it.

Gatherer (chimpanzee): omnivores who collect and store food. Gain DM+1 to surprise rolls.

Grazer (antelope): herbivores who move from food source to food source and spend a majority of their time eating.

Hijacker (lion): scavengers who steal the kills of others through brute force.

Hunter (baboon): omnivores who are opportunistic predators when easy prey presents itself.

Intermittent (elephant): herbivores who do not devote their entire time to searching for food.

Intimidator (coyote): scavengers who establish their claim to food by intimidating other creatures.

Killer (shark): carnivores with a raw, frenzied killing instinct.

Pouncer (cat): carnivores who stalk and ambush their prey. Gain DM+3 to surprise rolls.

Reducer (vermin): scavengers who devour any source of food, including remains left behind by other scavengers.

Siren (angler fish): carnivores who use a lure to attract prey. Gain DM+3 to surprise rolls.

Trapper (spider): carnivores who use traps to capture their prey. Gain DM+3 to surprise rolls.

ANIMAL SIZE, STAMINA, LIFEBLOOD, AND DAMAGE

For each creature, throw 2D for size, applying any size DMs from the Terrain and Movement table. Size

determines the creature's Lifeblood, Stamina, and damage. As for sentient beings, Stamina and Lifeblood indicate how much damage the animal can take. Throw for two numbers as indicated on the table. The first number is Stamina; the second is Lifeblood. The damage column modifies the amount of damage dice the animal's attacks inflict. See the animal weapons table for the baseline damage. For example, if a weapon causes 2D damage by default but the "Damage Modifier" column indicates -1D, this animal's weapon will only cause 1D damage. The entry "x2", on the other hand, will modify the damage to 6D. If the table reduces a weapon's damage dice to zero, then each attack causes only 1 point of damage.

Animal Weapons, Armor, and Base Speed

Throw 2D on the following table to indicate the animal's natural weapon and base damage. DM+8 for carnivores; DM+4 for omnivores; DM-6 for herbivores. Animals with two different weapons attack twice. A +X after a weapon's name indicates a positive DM to attack throws.

Throw 2D-7 on the following table to determine the animal's armor rating, adding the number you rolled on the size table as a positive DM. Further DM+4 for herbivores; DM+2 for scavengers; and DM-2 for carnivores. Flyers suffer an additional DM-2 on this table.

Animal Movement Speed

Finally, consult the following table to determine the animal's movement speed. The table generates speed multipliers; multiply this by 10 (a human's average walking speed) to get the animal's speed in meters per combat round.

Animal Reactions

The animal's ecological subtype influences its reaction in encounters with people, such as colonists and adventurers. When characters provoke an animal, or simply enter the territory of a more aggressive species, throw 2D and consult the following table. An entry of "Attack 6+" and "Flee 3-", for example, means that if the reaction roll is 6 or more the animal will attack, and if it is 3 or less, it will flee. If the roll is between these numbers, the animal ignores the characters until provoked again.

Xenofauna Encounter Example

Isaac would like to generate a xenofauna encounter for a group of player characters traveling in the mountain wilderness of an unexplored world.

1. Choose the animal's habitat terrain and roll for its movement type: The characters are hiking in the mountains looking for an old, abandoned facility. Isaac rolls 1D on the Terrain and Movement table, using the Mountain row: 6, giving the result F-6. This is a flying creature with a size modifier of DM-6.

2. Determine the animal's ecological niche and subtype: Isaac can't just choose an ecological niche for this flying creature, as he's a software developer, not an ecologist. He rolls 2D on the Animal Niche Table and gets 8: Herbivore. He knows what an herbivore is. Isaac rolls 2D on the Animal Subtype table and gets 9: Grazer (2D). This means that this herbivorous flying creature moves in flocks of 2D animals, from food source to food source, eating. Like a hummingbird, giant insect, or even waterfowl.

3. Determine size, stamina, lifeblood, and damage: Now to determine animal Size, Isaac rolls 2D on the Animal Size table: 12 – 6 (Size DM) = 6! Isaac chuckles at this interesting result: a 50kg flying creature that grazes on vegetation in groups of 2D.

Consulting the Animal Size table, these creatures have Stamina of 2D and Lifeblood of 4D, which Isaac will roll: Stamina 8 and Lifeblood 10. They are not particularly hardy creatures. Size 6 has no modifiers for creature weapon damage.

4. Determine weapons, armor, and base speed.: Weapons: Isaac throws 2D on the Animal Weapons table, applying a DM-6 for herbivores: 6 – 6 (Herbivore DM) = 0. This means that the creature only has its "hooves" that do 2D damage. This creature is some sort of flying grazer that lives in the mountains and has no offensive weapons.

Armor: rolling 2D-7 on the Armor Table, Isaac gets 7 – 7 + 6 (Number rolled on the size table DM) +4 (Herbivore) – 2 (Flyers) = 8. This gives the creature a natural Armor Rating of 3 points.

Speed: the creature is a Grazer, and looking at the Animal Speed Multipliers, Isaac sees that he should roll 1D-2 and multiply that result by 6m to get the creature's movement rate: 5 – 2 = 3, which means that this big creature moves at 18m per combat round.

Finally, Isaac notes that this Grazer has reactions Attack 8+ and Flee 6-.

Isaac imagines some sort of giant version of the Japanese emerald beetles that currently devour his roses in his yard: a very hungry, annoying giant insectoid that does damage when it lands on hapless characters with its big wings or hairy insect feet.

TERRAIN AND MOVEMENT TABLE

TERRAIN AND ECOSYSTEM	SUBTYPE DM	SIZE DM	1	2	3	4	5	6
Clear	+3	-	W	W	W	W	W+2	F-6
Plain or Prairie	+4	-	W	W	W	W+2	W+4	F-6
Desert	+3	-3	W	W	W	W	F-4	F-6
Hills	-	-	W	W	W	W+2	F-4	F-6
Mountain	-	-	W	W	W	F-2	F-4	F-6
Forest	-4	-4	W	W	W	W	F-4	F-6
Jungle	-4	-3	W	W	W	W	W+2	F-6
Broken Ground	-3	-3	W	W	W	W	F-4	F-6
Swamp or Marsh	-2	+4	S-6	A+2	W	W	F-4	F-6
Beach or Shore	+3	+2	S+1	A+2	W	W	F-4	F-6
Riverbank	+1	+1	S-4	A	W	W	W	F-6
Shallow Sea	+4	+1	S+4	S+2	S	S	F-4	F-6
Open Ocean	+4	-4	S+6	S+4	S+2	S	F-4	F-6
Deep Ocean	+4	+2	S+8	S+6	S+4	S+2	S	S-2

ANIMAL NICHE TABLE

2D	ANIMAL NICHE	2D	ANIMAL NICHE
2	Scavenger	8	Herbivore
3	Omnivore	9	Carnivore
4	Scavenger	10	Carnivore
5	Omnivore	11	Carnivore
6	Herbivore	12	Carnivore
7	Herbivore		

ANIMAL SUBTYPES TABLE

2D	HERBIVORE	OMNIVORE	CARNIVORE	SCAVENGER
1-	Filter (1D)	Gatherer	Pouncer	Carrion-Eater (2D)
2	Filter	Eater	Siren	Reducer (1D)
3	Intermittent	Gatherer	Pouncer	Hijacker (1D)
4	Intermittent	Eater (2D)	Killer (1D)	Carrion-Eater (2D)
5	Intermittent (1D)	Gatherer	Trapper	Intimidator(1D)
6	Intermittent	Hunter	Pouncer	Reducer
7	Grazer	Hunter (1D)	Chaser	Carrion-Eater (1D)
8	Grazer (1D)	Hunter	Chaser (3D)	Reducer (3D)
9	Grazer (2D)	Gatherer	Chaser	Hijacker
10	Grazer (3D)	Eater (1D)	Killer	Intimidator (2D)
11	Grazer (4D)	Hunter (1D)	Chaser (2D)	Reducer (1D)
12	Grazer (5D)	Gatherer	Siren	Hijacker
13+	Grazer	Gatherer	Chaser (1D)	Intimidator (1D)

ANIMAL SIZE TABLE			
2D	WEIGHT (KG)	STAMINA/LIFEBLOOD	DAMAGE MODIFIER
1-	1	1/1D	-2D
2	3	1D/1D	-2D
3	6	1D/2D	-1D
4	12	2D/2D	-
5	25	2D/3D	-
6	50	2D/4D	-
7	100	2D/5D	-
8	200	3D/5D	+1D
9	400	3D/6D	+2D
10	800	3D/7D	+3D
11	1600	3D/8D	+4D
12	3200	4D/8D	+5D
13	5000	4D/9D	+6D
14	10000	5D/10D	x2
15	15000	5D/12D	x2
16	20000	7D/14D	x3
17	25000	7D/15D	x4
18	30000	8D/16D	x4
19	35000	9D/17D	x5
20+	40000	9D/18D	x6

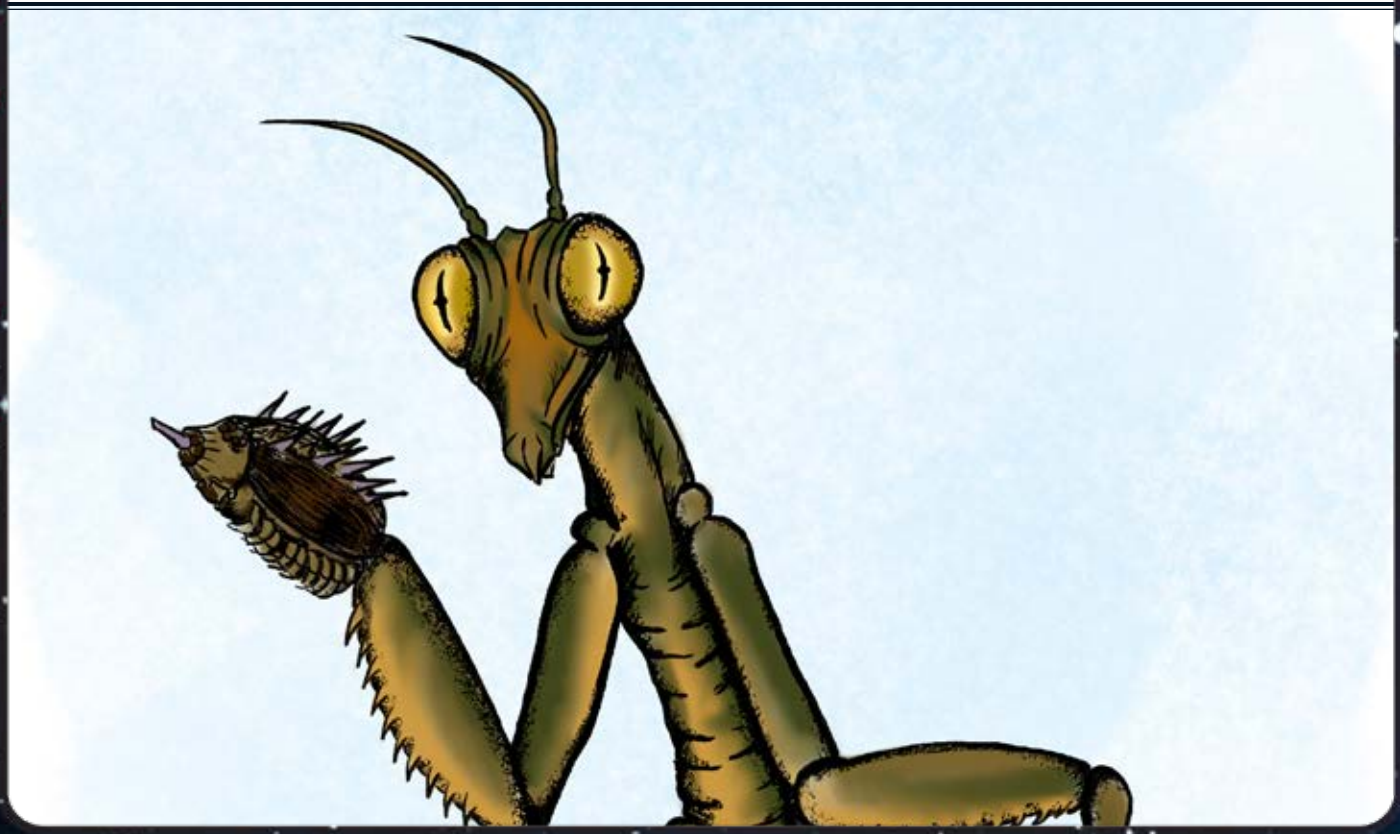
ANIMAL WEAPONS TABLE		
2D	WEAPONS	DAMAGE
1-	Hooves	2D
2	Hooves and Horns	2D/2D
3	Horns	2D
4	Hooves and Teeth	2D/2D
5	Horns and Teeth	2D/2D
6	Thrasher	3D
7	Claws	2D
8	Teeth	2D
9	Claws and Teeth	2D/2D
10	Claws+1	2D
11	Stinger	3D
12	Teeth+1	2D
13	Claws+1 and Teeth+1	2D/2D
14	Claws+1 and Stinger+1	2D/3D
15	Claws+2	2D
16	Teeth+2	2D
17	Claws+2 and Teeth+2	2D
18	Claws+2 and Stinger+2	2D/3D
19+	Projectile	As Weapon

ANIMAL ARMOR TABLE			
2D	ARMOR	2D	ARMOR
1-	0	10	4
2	0	11	4
3	0	12	5
4	1	13	6
5	1	14	7
6	2	15	8
7	2	16	9
8	3	17+	10

ANIMAL MOVEMENT SPEED TABLE		
TYPE	SPEED MULTIPLIER	MINIMUM SPEED (IN M/ACTION)
CARNIVORE		
Chaser	1D-2	20
Killer	1D-3	10
Pouncer	1D-4	10
Siren	1D-4	0
Trapper	1D-5	0
HERBIVORE		
Filter	1D-5	0
Grazer	1D-2	20
Intermittent	1D-4	10
OMNIVORE		
Eater	1D-3	10
Gatherer	1D-3	10
Hunter	1D-4	10
SCAVENGER		
Carrion-Eater	1D-3	10
Hijacker	1D-4	10
Intimidator	1D-4	10
Reducer	1D-4	10

ANIMAL REACTIONS TABLE		
TYPE	**ATTACK**	**FLEE**
CARNIVORE		
Chaser	Will attack if the animals outnumber the characters.	5-
Killer	6+	3-
Pouncer	Attacks if it has surprise.	Flees if surprised.
Siren	Attacks if it has surprise.	4-
Trapper	Attacks if it has surprise.	5-
HERBIVORE		
Filter	10+ if possible	5-
Grazer	8+	6-
Intermittent	10+	4-
OMNIVORE		
Eater	5+	4-
Gatherer	9+	7-
Hunter	6+ if larger than at least one character. 10+ otherwise.	5-
SCAVENGER		
Carrion-Eater	11+	7-
Hijacker	7+	6-
Intimidator	8+	7-
Reducer	10+	7-

Since this is a previously undiscovered creature, Isaac will let the players name the species once they've encountered it.



Referee Advice

This chapter provides advice on various subjects related to Refereeing a game of Cepheus Deluxe.

Building a Cepheus Deluxe Setting

The world generation chapter provides the Referee with the tools to develop the worlds and politics in a subsector of space. However, before adventuring can begin, Referees should develop some underlying assumptions about their game world, and the kind of game they are running. Not everything has to be decided immediately before gameplay begins—the players will no doubt inadvertently offer their own ideas for the setting, and the Referee should eagerly adopt them—but there are all sorts of questions you should ask yourself as the Referee at some point before the players are at the table, and the dice are rolled.

Think about the theme and tone of the game: Swashbuckling space opera games play very differently than games about desperate wars against bizarre aliens. What sort of campaign are you interested in running? Restless space-truckers hauling freight and getting into weird situations is a standard mode of play, but it has its own assumptions about setting, themes, and tone of play baked in. What sorts of adventures should the Referee develop? Who are the recurring villains, friends, and patrons? What are the big and little problems in the setting that require a group of self-interested player characters to sort out in some way?

If you as a Referee don't have the answers to these questions immediately, that's alright. Start small, see how the players react to the situations they find themselves in and the obstacles you place in their path. Then, as you get a sense of what is interesting to them individually and as a whole, you can grow your campaign world accordingly. Remember: the campaign setting exists as a platform for player character adventuring and interaction. Running a different game than the one your players are currently playing in will rapidly become an exercise in frustration. Conserve your energy and give your players what they want—while still making them work hard for everything.

Use the World Generation system, but do not adhere to the dice throws in all cases. Adjust statistics to produce the locations that you want. But do not ignore the dice. Allow for some locations that are strange, bizarre, and surprising to the players. Science fiction is the place for new, unusual, and unique journeys.

At the outset, one planet at the center of the map, with a few worlds at Jump-1, 2 or 3 away will be enough to start adventuring. The central planet should be sufficiently well-settled to equip the PCs for their first adventures. It is a borderland at the edge of "proper civilization" before the frontier begins. Civilization is in one direction; the unknown is in the other. Add in more worlds as the PCs move from world to world.

Think about the organization of inhabited worlds. Are the worlds all under one interstellar government, or are there smaller competing governments with no more than a few worlds under their control? Some planets may be independent and outside the reach or at the edge of a larger government. What does that mean for visitors?

Not every element in the setting needs some level of explanation for why it is there but having a general sense of the setting's history will help explain things on the fly. Some worlds are the core of their culture and government, usually with higher population and technology. Others will be frontier colonies, with few people and less technology. In between are worlds with better or worse development. The age of your setting will force you to ask many questions and provide many answers: why are there humans living on the frontier in the first place? Was it once a highly populated part of space? What was the calamity that tore the old civilization apart? Are there remnants and reminders of the ancient times scattered everywhere? Or is this truly the high frontier, where no human has ventured before?

Whenever possible, use some aspect of a world's profile to remind players that they are not on Earth. Different gravity, air without oxygen, radical topography, odd-colored skies, these are all reminders of being in another place. Humans prefer certain world characteristics. Many worlds will be reasonably Earth-like, and it is easy enough to understand why people settled there. Yet there must be a good reason for living on a heavy-gravity world with an acidic atmosphere. These kinds of worlds can exist too: all that is needed is a good reason to be there. That reason might also be why the PCs venture there. Empty planets on the map may not really be empty, it's just that no one has discovered the reason for humans to inhabit it yet.

Add elements to the setting map as you need them. Trying to map out and describe a dozen worlds all at once before the campaign has even begun can be overwhelming. The players won't visit all your worlds in the first adventure—and some might never be visited—so add the details of the location when the PCs arrive. If the players never head to a place you've prepared, file off the names, and reuse your hard work. They will never know the difference.

Finally, do not be ashamed to "borrow" and adapt ideas for settings, adventures, and NPCs from other

sources. You like science fiction media. Your players like science fiction media. Take your favorite Star Trek episode, for example, and adapt the premise—never the conclusion! —to your table's needs. The players running a casino heist on a massive space cruise ship are testing the security systems. Your favorite settings are available too: that Ice Planet the players are hiding on might have some underground zone of warmth where wondrous creatures live. The Desert Planet is deep within the Empire and a popular vacation spot, not a remote backwater—they've even tamed the giant worms.

Careers and Setting

If you're having a hard time coming up with the trappings for your setting, look to the implicit assumptions baked into the Cepheus Deluxe rules. They can provide you with helpful prompts to help generate setting details as well as adventure hooks. For example, if Referees are stuck regarding what sorts of adventures their setting would support, look no further than the following Career and Setting Ideas table.

High Level Play in Cepheus Deluxe

For a game experience different from roaming around the galaxy fighting random villains, Referees and players might try setting out for High Level Play. This mode of campaigning is not represented mechanically on the character sheet; it exists in the game setting as the PCs gain power and influence over the setting itself. You'll know when High Level Play is happening when the regional governor or planetary dictator has to take the PC's reaction to his plans into account.

How does High Level Play start? Say a PC musters out with a merchant ship. The player could decide that one ship is not enough: he wants a whole fleet of them! An army veteran might aim to build a private army of 10000 soldiers and vehicles. Then she can overthrow the oppressive government of the dictator under whom she served. A Rogue might try the same, but by means of sabotage, espionage, and political maneuvers. Scouts might claim ownership of a newly discovered planet, rich in valuable resources. Elites could become the power behind the throne, or even the Power ON the throne.

High Level Play often involves amassing:

- Money and sources of income
- Weapons and people to use them
- Ships and crews
- Social Standing
- A Cause to pursue

Money can be made through interstellar trade, land ownership, found treasures, or theft. Weapons, ships, and hirelings are available to hire by people with money. Social Standing can be advanced by means of lavish spending, or by interacting with NPCs that already have it. Rulers can award titles and status to PCs for services rendered and public goods achieved, or for a large enough cash donation.

The Cause can be any goal that the players can devise. The players should share this goal with the Referee. The Referee is not obligated to help the players to accomplish it; the Referee's job is to provide meaningful obstacles and challenges as the players work towards the goal. There should be no guarantee that the players will ever achieve their goal, though it should certainly be feasible given the right decisions and a little luck. Clever planning and bold execution are the key!

There are no levels or ranks in High Level Play, only comparisons between powerful entities and groups. The Referee should be tracking which NPCs have more money, more followers, and more ships than the PCs? However, High Level Play should not devolve into Adventures in Accounting. If the PCs use hirelings with the Admin skill, the bookkeeping can be pushed off to them. Adventures, Crises and Making History should be the main focus of any High Level Play campaign.

Factions and Groups

Your Cepheus Deluxe setting can be further enlivened by adding NPC factions that have goals of their own. These goals may or may not align with those of the PCs, and this is all for the good: the goal of having any NPC faction is to inspire the players to have adventures. There is no better way to inspire a Referee to make adventures than for the players to say: "we would like to interact with this faction." The Referee can determine the size, influence, and specific goals of the factions present in the setting. Many but not all will have public representatives and signs, symbols, or slogans. What they all must have been a way to interact or interfere with the PCs and their goals. With that in mind, see the Factions and Groups table for some ideas for factions in Cepheus Deluxe settings.

Super-Science

The equipment list in Cepheus Deluxe is extensive but makes no claims of completeness. This is intentional, as it allows the players and referee to borrow materials from elsewhere, and to further imagine and invent new technologies for the setting. These new technologies can be invented, found, bought, or stolen.

As long as they do not disrupt the game setting, the Referee should allow most tech ideas. However, that

CAREER AND SETTING IDEAS TABLE	
BECAUSE OF THIS CAREER...	**THE SETTING COULD HAVE...**
Agents	Spies and espionage. Bounty hunting, missing persons cases, crime scene investigation, police work, and government corruption. Shady patrons working through cutouts. Coded messages and tradecraft. Top secret courier work.
Army	Wars, war zones, and simmering insurgencies. Long patrols on hostile worlds. Starving refugees who need medical aid. Suspicious locals who play both sides of the fighting off against each other. Random artillery barrages! Friendly fire incidents. Squadmates cracking under the pressure. Firefights. Special forces operations.
Belters	EVA work to secure asteroids. Deep mining and prospecting in the void of space. Claim jumpers and organized crime protection rackets. Rowdy mining habitats and lots of fistfights to let off steam. Rickety old prospecting ships that the crews care for lovingly. Asteroid miners discovering government secrets, or worse: things humanity was not meant to know…
Colonists	Untamed wilderness teeming with opportunity and danger. Pharmaceutical compounds worth a fortune back in the Core worlds. Not-dinosaurs eating colonists. Accidentally discovering old ruins from the previous generation's war. Hostile weather. Indigenous aliens objecting to the colony, but who haven't resorted to violence…yet.
Elites	Family drama. Plots and counterplots in the highest political offices or corporate boardrooms. Hostile business takeovers. Opulent parties with exotic luxuries. Space yachts. Witnessing the widening chasm between the rich and the poor. Rescuing upper class twits from their own foolishness for extremely good pay.
Marines	Bug-hunts on board floating space hulks. Boarding actions during high-energy space battles! Barracks and other slice-of-shipboard-life stories. High velocity orbital insertions into hot LZs. Defending the embassy from angry locals. Bodyguard duty for a high-ranking government official. Commando raids on shipyards.
Merchants	Corporate competition for resources. Merchant houses angling for new contracts and deals. Salty spacers of the merchant marine telling tall tales. Banks foreclosing on independent traders who couldn't make their payments. Smuggling anything that can be smuggled past customs inspectors. Bribing officials and paying off crime bosses.
Navy	Five-year frigate patrols on the frontier. Epic space battles involving massive fleets. Fighter pilots and their need for speed. Boarding actions with cutlasses. Honor duels. Surviving horrible commanding officers. Corrupt quartermasters. Private contractors installing untested weapons on the ship. Away teams to strange cultures. Enforcing the blockade of a hostile planet. Pirate hunting.
Pirates	Attacking merchant shipping and making off with cargo before the navy arrives. Fighting over the spoils of a good haul. Smuggling and shore-watching. Dealing with fences and being double-crossed by nearly everyone. Paying crime bosses their cut. Fleeing from the navy. Discovering a jump route to a hidden treasure. Eyepatches.
Rogues	Crime and punishment. Informants. Honor among thieves, or the lack thereof. Heists, double-crosses, and that score big enough that you could pay off all your debts and never have to do this sort of work ever again. Bribery, extortion, racketeering, fraud, and the enemies you made along the way. Cheating at cards.
Scholars	Ancient history, ancient languages, aliens, and ruins of what has come before. Strange artifacts that demand to be studied. Hurrying to find the truth before another scholar gets all the glory. High energy experiments. Research stations on the edge of space, studying something very dangerous. Technology that might change/kill everything. Bioweapons run amok in medical labs. Racing against time to find the cure to save the colony.
Scouts	Unexplored planets. Harsh wilderness with untold wonders hidden within. First contact with alien civilizations. Discovering a long-lost colony world and surviving to tell the tale. Outlandish Explorer Society parties. Eccentric scouts that have seen a little too much. Stumbling on a secret government operation and being hunted down. Lonely jump voyages gone awry.

does not mean that the PCs should easily acquire new technology. They should have to work for it, and that means adventures to find parts, schematics, and the know-how to put something together. It could also mean prying new technology free from the cold, dead, appendages of whoever was its previous owner…

However, it is important to note some hard limits on new technology. The Cepheus Deluxe game has a few technological assumptions baked in. These should never be considered hard limitations but know that changing these assumptions will result in a very, very different style of science fiction. Among these assumptions are:

- No FTL communication
- Slow interstellar and interplanetary travel
- A Preference for physical rather than virtual activity
- Physical weapons are more common than energy weapons
- Human-centric action

Before introducing a new technology, the Referee should consider how the device relates to those defining factors. Avoid setting-breaking technologies; an FTL radio would radically change the setting as given. Further questions to ask:

- Will it make the PCs too powerful, too fast?
- Why isn't this standard already, or should it be standard?
- Does it duplicate already existing technology?
- How will governments and societies respond to this; will it be commonly legal or illegal?
- How much should it cost to purchase or repair?
- At what Tech Level does it become available?
- In what ways could the PCs abuse this device?
- Will use of this device substitute for a PC having a skill? (Do not allow these)

If a new device is powerful, it must have limitations. Law Level and price are effective means to curb the availability and use of such items. Referees should remember that if it is not unique, NPCs may have the device as well. Acquiring a unique item should be a major undertaking that spans multiple adventures. However, once the Referee approves the device, the players can innovate the ways it can be used as much as they like.

HOW TO USE CONTACTS

Contacts are one of the most useful player and Referee tools in the game. They provide adventure hooks, additional resources, and ample fun roleplaying opportunities. Remember that most player characters will start the game with at least one contact, and they should be recurring characters for many adventures.

Referees can use contacts as patrons, sources of information and equipment, or even as the object of a specific adventure. Patron contacts should be friendly and trustworthy and should only betray the player characters with ample forewarning and a possible, though very costly, way out. These are the PCs' friends and colleagues from the old days, after all. Contacts will happily furnish PCs with information and equipment, but usually will need something in trade: a favor, cash, equipment, or information. Again, contacts might be unsavory, but they should be fundamentally useful and trustworthy. Finally, a contact—especially a particularly beloved contact—can be used as the object of the adventure itself: perhaps the contact is in trouble and needs the PCs to get out of a jam. Or they are unable to take advantage of an opportunity alone and have called in their old friends to help out, for a share in the reward. Naturally, a contact can be abducted, or hurt, or even killed, and the PCs can set out on a mission to right the wrong. If they lose their contact in this way, be sure to provide them with a new contact who is suitably impressed by the loyalty they have for their old friend.

Keep a record of significant NPCs that the PCs have encountered, and where they can be found. When the PCs need help, they should reach out to their Contacts. The Referee should make note of Contact reactions – strong positive reactions could mean the NPC will help above and beyond what is asked of them. Strong negative reactions could mean the Contact will betray or abandon the PCs given the opportunity.

HOW TO USE ENEMIES

Instead of Contacts, certain career events will gain PCs Enemies. These NPCs can serve as rivals, foils, or bitter foes, depending on how the Enemy was acquired, the circumstances of the career event, and the whims of the Referee and player. Enemies are intended to be recurring adventure hooks, or spoilers for those players whose plans are just going too well. They can become beloved player favorites who spice up adventures, or fearsome opponents who cause the PCs to run at the very mention of their name.

Whatever the case, Referees should put some thought into developing Enemy NPCs. Use the career event in question, combined with the social encounter tables to make the NPC memorable. Enemies should be as skilled, or more skilled, than their PC rival, and should have access to comparable assets as well.

Referees can use Enemies in a variety of ways. One fun approach is to have the Enemy notice the PCs while they're doing something unrelated, and then divert resources to utterly wreck whatever plans the PCs had. These enemies hold their grudges, but they have

FACTIONS AND GROUPS TABLE		
	FACTION	WHAT IS THEIR DEAL?
RELIGIOUS GROUPS		
These can include churches, monasteries, or other movements.	The Path	Utterly pacifistic neo-Jainites who will literally not hurt a fly. They are strict vegans. For one day of the week, they do not speak. They insist that their religion is the way forward to human enlightenment.
	Neo-Luddism	Just like it says on the tin: this organization eschews any technology that would take good jobs away from humans. They have been known to destroy robots and automatons on sight and have a particular distain for Artificial Intelligence.
	Pact of Ur	A neo-Sumerian technological cult that believes all humanity is corrupt and must be washed away in the waters of Tiamat. They are responsible for multiple catastrophic life support failures that have killed thousands.
	Calatravans	A military order that emerged out of an obscure monastic sect a century ago. The Calatravans believe that the sector belongs to their holy order and will liberate each planet in due time. Their knights are elite combatants, particularly well-trained in vibroblade combat.
ARMED FACTIONS		
Any group that has decided that violence is their means.	Unser Ding	One of a myriad of organized criminal cartels that trades in all sorts of illicit goods: drugs, weapons, and slaves being the three most commonly trafficked. The Unser Ding are known to be particularly violent.
	Arnum Liberty	The planet Arnum was conquered recently, and Arnum Liberty has taken the cause of freedom for their home to the stars. They have spent most of their funds gathering supplies and hope to begin a general insurrection soon. They still do need a training cadre.
	The Cerna	A nihilist/anarchist group of violent agitators, the Cerna have bombed naval stations and starports, killing hundreds in their attacks.
	The Hourglass Gang	A pirate gang formed around the Black Widow, a captured 400-ton frigate. The gang has a number of smaller ships, all with their trademark red hourglass marking. They take prisoners, occasionally.
	Hotch Regiment	The premier mercenary firm in the subsector, the Hotch Regiment number only 50 mercenaries. They are superbly trained and astonishingly well-equipped, leading many to wonder if they are not really a deniable government asset.
ADVOCACY GROUPS		
NGOs and other groups.	Children Eat Free	A small but effective anti-hunger charity that works directly on worlds hit by drought and famine. They are fearless workers for the good, and often need help in emergencies.
	IMPACT	This lobbyist organization is notorious for having influenced the outcomes of over a dozen peaceful planetary regime changes in the past decade. They are political operators par excellence.
	The High Academy of Sciences	The most prestigious scientific research organization in known space, the Society, as it is known colloquially, is always sponsoring research projects across the frontier. The organization is well-connected, and many of its members are senior government officials.
	The Better Way	This social change NGO works to increase automation and the prevalence of artificial intelligence in all facets of human life. Their goal is to "liberate humanity from the shackles of drudgery and work, thereby allowing all to elevate themselves by higher pursuits."

their own lives, after all. These sorts of enemies are too busy to actively pursue the PCs, unless they are foolish enough to move against their interests directly. A second approach is to have the enemy actively working against the PCs. This means that this NPC antagonist will be a major problem for the players, and they will have to devote significant resources to overcome the old foe. Referees should take care to avoid direct confrontation–at first. Players are notorious to shoot first and not ask many questions at all when confronted by a known enemy from their past. Better to have the PCs investigate their opposition and discover, to their horror, that their antagonist knows them already, and is motivated by the best kind of old hatreds.

ADVENTURE SEEDS

We provide the following adventure seeds to help spark the imagination of any overworked Referee. The details of each adventure must be determined by the Referee based on their game and style of play.

ADVENTURE 1 – SPECIAL CARGO

The crew of a cargo ship agree to carry a mysterious 30-ton module as cargo.

Character Type: Any

Required Equipment: Starship with at least 30 tons of available cargo space.

Player Information: Right before departure, a shipper contacts the player characters, with a lucrative opportunity: ship a 30-ton container to their next destination. The shipper is willing to pay up to 200% of the going rate. The shipper even suggests pulling lower priority cargo to get his module on their ship. The container's contents are classified by corporate security but are not hazardous and not illegal—at least according to the accompanying paperwork. The shipper will also be accompanying the shipment, and is willing to pay for a High Passage, at up to a 50% premium if needed to bump another passenger.

Referee Information: The exact contents of the cargo are unknown to the players; they are listed as "miscellaneous farming equipment". However, the way the shipper treats the cargo would indicate it is very valuable/perishable. The Referee is encouraged to include an event or encounter inspired by a complication below that will reveal the contents, and the consequences of hauling them, to the players.

CARGO COMPLICATIONS	
1.	**OF COURSE, it's illegal**. While legal on the current world, the contents are illegal on the destination world. Should the contents be discovered by customs, the characters will have a lot of explaining to do. They will be accused of smuggling.
2.	**Not only is it illegal, it's also dangerous**. The shipment includes various types of volatile high explosives (non-nuclear).
3.	The contents are neither illegal nor dangerous – **just very perishable**. Should anything happen to the ship during transit that could affect—for starters—gravity, life support, or stability, the shipment will be ruined, and the shipper will blame the characters.
4.	The equipment is **above the Tech Level** of the destination planet. These are advanced computers being shown at a trade show that has a specific start and end date. While a high priority, it isn't illegal.
5.	**The cargo consists of people**: The container holds humans in cryoberths. They are high-value slaves being brought to market.
6.	**The cargo consists of ancient alien artifacts** – while they probably don't work, who knows what could happen in hyperspace.

ADVENTURE 2 – DISTRESS CALL

The players are operating a starship and receive a distress signal from a nearby ship.

Character Type: Any

Required Equipment: Starship

Player Information: The player's ship receives a distress signal from a nearby starship. The ship experienced an explosion in its jump drive when they tried to initiate a jump. All systems are failing, and assistance is needed.

Referee Information: Most players are suspicious of distress calls as it is a common ploy by pirates (and Referees!) to lure victims off the well-traveled space lanes and into traps. These scenarios do not include that common trope but provide other reasons for a distress call.

DISTRESS COMPLICATIONS	
1.	**The ship really is in trouble**. It is a 200-ton trader with 8 people aboard and 50 tons of cargo. The players have a limited amount of time to rescue everyone before life support fails.
2.	**The bridge crew was incapacitated in the explosion and other crew are injured**. Passengers are trying to save the ship and themselves but need help.
3.	**Another ship is nearby and is racing to the stricken vessel**. The crew on the new ship is utterly without scruples. They will not try to help anyone but will instead steal the cargo; To make things worse, they will actively interfere with the player's attempt to help.
4.	**The ship is severely damaged, far worse than reported**. As the players approach the vessel, it explodes. The good news is that there are several escape pods in the area that need recovery
5.	As #4 above, but **the ship was sabotaged**. The saboteur is one of the survivors, and they might strike the player's ship!
6.	**The legitimate distress call was sent out by a pirate Corsair**! Ironically, the pirates really do need help; their ship is dying. Naturally, at some point during the rescue operation, they decide that the player's ship would make a fine replacement for their own.

ADVENTURE 3 - MISSING CHILD

The characters are approached by a woman seeking a small team to rescue her daughter.

Character Type: Any, but military experience would help.

Required Equipment: A vehicle legal on the planet.

Player Information: Mr. Nathanos Goranca approaches one of the characters with a sensitive job. His daughter Conni has been kidnapped and she needs help rescuing her. Goranca cannot approach the police: she was warned her daughter would be killed if she did that. She believes that "professional security contractors" (read: random group of strangers) are her best shot of getting her daughter back. Her daughter is being held by her ex-wife on a farm about 10 kilometers outside the city. Nathanos does not believe his ex is armed with anything other than a knife, but she cannot be sure.

Referee Information: Nathanos's ex-wife Malisia had abducted their daughter Conni as part of a custody dispute. She will kill the child rather than let her return to Nathanos. If the police get involved, she will kill the girl – Malisia's brother is on the local police force, so she will get tipped-off if Nathanos calls the cops. The characters must rescue the child, ideally without harming her or the ex-wife. The child Conni is six years old and loves both parents.

The farm is a 10-hectare property that grows nuwheet. The crop is currently about a meter high and the nuwheet fields surround the house, except for a single paved road leading from the access road to the house. The house is a simple farmstead made from an old Cutter module; the two airlocks on the ends are now doors and there are four windows, two on each side of the module. The module is made of space-rated material, treat as Armor Rating-20. It would take 100 points of damage to create a person-sized hole.

CHILD COMPLICATIONS	
1.	Everything is as described. The farm has no additional people and Malisia has access to a kitchen knife equivalent to a Dagger.
2.	As 1 above, except Malisia has military training (Gun Combat 2) and access to synthsilk armor and an assault rifle.
3.	As 1 above, except there are farm workers who come to Malisia's defense. They are equal in number to the characters, armed with Clubs and Knives.
4.	As 2 above, except Malisia has sensors all over the property. What's worse, she will be ready and waiting for any rescuers: she wears an encased armor suit and wields a gauss rifle. Cruel Referees might also want to include tripwire traps with grenades and flares.
5.	Malisia is the parent with custody. Nathanos is trying to steal their child back is using the characters as catspaws. There will be no easy way to link Nathanos to the characters, unless they think to start a trail beforehand.
6.	The farm is a survivalist camp. There are twice as many defenders there as there are characters attacking it. They are all heavily armed and prepared to defend their own.

ADVENTURE 4 - A QUIET WAR

The characters are part of a mercenary group hired to raid a safe house harboring an enemy leader.

Character Type: Mercenaries, or a group of heavily armed characters

Required Equipment: Armor and weapons

Player Information: The character's mercenary outfit has taken a ticket to help defend a local government from insurgents. The character's squad has been assigned to enter an insurgent safe house and capture (if possible) or kill (only if necessary) a rebel leader. The insurgent will only be in the safe house for two days then will move on and the opportunity will be lost.

Referee Information: The insurgent is a minor leader in the local rebellion, but he is popular with the locals and moves frequently. An informant has told the government the leader will be present in the safe house for two days with minimal (1-2) guards. The safe house is just that, a suburban house in a quiet neighborhood.

The safe house is a typical suburban two-story home with 3 bedrooms and two bathrooms upstairs and a large open floor-plan living area downstairs, with a half bath. The leader will be sleeping in the main bedroom upstairs, and one guard will be sleeping in one of the other bedrooms. The other guard(s) will be patrolling the inside of the house or sitting and watching tri-vee (Referee's option).

QUIET WAR COMPLICATIONS	
1.	**The intel is good**. The two guards and the leader have autopistols and bulletproof vests. The leader will surrender if both guards are taken out of action.
2.	**The leader is very well guarded**. Four guards with synthsilk armor and gauss rifles defend him. The leader has an autopistol and a bulletproof vest. He will not surrender unless seriously injured.
3.	**As 2 above**, but the leader also has synthsilk armor and a gauss rifle and will fight to the death.
4.	**As 1 above**, but the leader is present with his wife and two small children. He will surrender if his family is threatened.
5.	**The leader is not present**, but the four guards from #2 are still there and will fight to the death.
6.	**The leader will immediately surrender** and will turn on his guards.

ADVENTURE 5 – CORPORATE ESPIONAGE

The characters are approached by an old contact. He is looking for a small, morally flexible team to steal corporate secrets. The true Patron is unknown, but presumably a rival corporation.

Character Type: Any, but military or espionage training is preferred.

Required Equipment: Sensors, weapons, transportation to a remote research base located in an undeveloped region of the planet.

Player Information: An old contact approaches the characters with an offer. He needs a computer and samples of some prototype equipment stolen from a research center located about 500km outside the capital city of this planet (taking about 6 hours by groundcar). Security is mostly electronic as the facility relies on its remote location as its primary means of defense. They have radar systems to spot incoming flyers, so the characters will have to procure their own means of inconspicuous ground transportation to get there.

Referee Information: The characters should have at least one wilderness encounter on the way to the facility; the details of which are left to the Referee. The facility consists of two buildings: one is obviously a greenhouse; this is where the prototype gene splicing equipment is located. While not earth-shattering technology, this gene-splicer could increase crop resistance to disease allowing greater agricultural productivity. The gene-splicing technology is considered prototype technology for the next higher tech level in the setting. The equipment is valuable to corporations, but almost worthless to an individual. The second building is a small office facility with half-a-dozen rooms. The laptop computer the characters need to steal is in one of the offices.

The terrain near the facility is rolling hills with light forests of blue-leafed trees called "everblues" by the locals.

The gene-splicing equipment is about 2 kg in size and is used to modify plants in situ. The computer is an Omnicomp.

ESPIONAGE COMPLICATIONS	
1.	The equipment is a new type of gene-splicer and is sitting **out in the open but bolted to the table**. The facility has only one cleaning person present, who will run and hide as soon as she sees the characters and call security, which will arrive within 10 minutes.

2.	There are about a dozen people at the facility going about their duties. Only **one security guard is present**, wearing a bulletproof vest and carrying a laser pistol. While the workers might try to stop the characters, they have no real means to defend themselves if threatened.
3.	The facility is **guarded by two Security Bots** and the guard per #2 above. If they are alerted, the workers will destroy their equipment and research.
4.	As 3 above, but **the gene-splicing equipment is being used on unwilling test subjects**. There are four captive patients. The security guard is wearing cloth armor and has cybernetics: an internal weapon (TL13 Blaster) and an advanced cybernetic eye.
5.	As 3 above, but the facility is **guarded by two War Bots.**
6.	**The facility is an armed camp** with a platoon of mercenaries who will shoot first and never ask questions. The gene-splicing equipment is used in the production of longevity treatments, which are made here. All personnel have laser pistols.

ADVENTURE 6 – ALIEN CONTACT

The characters encounter an alien who needs their help.

Character Type: Any, but at least one scout will be beneficial.

Required Equipment: Starship

Player Information: The players are approached at the starport in a relatively deserted location. An alien seeks passage offworld for herself and her family. They claim to have been attacked by xenophobic locals and need to get offworld quickly. They have no travel documents but do have credits to pay for their trip. They want to go to a world 2 parsecs away that has a reputation for welcoming this species of alien.

Referee Information: The alien refugees are desperate. They are all hiding in a warehouse on the starport. The family of four is able to pay for steerage passage. They will pay twice the going rate if pressed, but they have only the clothes on their spinal quills, which are torn and covered in their blue blood. The two children are especially small and cute, and we encourage the Referee to play up their cuteness.

ALIEN COMPLICATIONS	
1.	**All is as described**. If the characters don't get them offworld within 12 hours, the family will be attacked by a small mob wielding clubs and will try to beat them to death.
2.	**The family is not quite as poor as they presented themselves**. They have about 2 tons of essential personal equipment and can pay triple rates if necessary.
3.	**The mob will attack as the characters** are loading the family onto the ship. The mob will attack the aliens first, but once they realize the characters are helping, their ire will turn towards the characters and their ship.
4.	As 3 above, but **the mob is accompanied by local starport police** who will send a 200-ton System Defense Boat after the character's ship.
5.	**The alien parents are criminals** who have stolen valuable artifacts from the locals.
6.	As 5 above, but **the aliens were despotic rulers of part of this world** and are now fleeing angry locals in the aftermath of the coup that unseated them. Their luggage and personal equipment are stuffed with valuables and money stolen from the locals.

APPENDIX A: SOURCES OF INSPIRATION

Science fiction may deal with space, but no work of science fiction exists in vacuum. Many works of art and human creation – literature, film, television programs and video games, among others – inspired the writing of this book. They may also serve the player and Referee as excellent sources of inspiration for their games. Therefore, we provide a short list of such sources of inspiration for your reading, viewing, and playing pleasure – as well as for inspiration for your own games.

LITERATURE

Corey, James A – The Expanse novel series.
Heinlein, Robert – Starship Troopers, The Moon Is a Harsh Mistress
Longyear, Barry B. – Enemy Mine
Niven, Larry – Known Space stories such as A Gift from Earth, Ringworld and the Man-Kzin Wars
Robinson, Kim Stanley - Mars Trilogy (Red Mars, Green Mars, Blue Mars)
Scalzi, John – Old Man's War
Silverberg, Robert – Across a Billion Years
Simmons, Dan – Hyperion Cantos
Strugatsky, Arkady and Boris – Roadside Picnic
Williams, Walter Jon – The Praxis

FILM

Alien and its sequels
Enemy Mine
Event Horizon
Outland
Serenity

TELEVISION

Andromeda
Babylon 5
Dark Skies
Firefly
Love, Death, and Robots
New Battlestar Galactica
Space: Above and Beyond
The Expanse

VIDEO GAMES

Alien Legacy
Cyberpunk 2077
Dead Space Trilogy
Deus Ex series
Elite and its sequels Elite: Frontier, Frontier: First Encounters and Elite: Dangerous
FTL: Faster Than Light
Interstellar Space: Origins
Mass Effect Trilogy
Phoenix Point
Red Faction and Red Faction: Guerrilla
S.T.A.L.K.E.R: Shadows of Chernobyl and its sequels, Clear Sky and Call of Pripyat
Star Control 2 and its free remake, The Ur-Quan Masters
Starflight and its sequel, Starflight 2
Stellaris
Subnautica
System Shock and its sequel, System Shock 2
Transcendence
UFO: Aftermath
Wing Commander and its various sequels
X-Com: UFO Defense (also known as UFO: Enemy Unknown), and its modern remake XCOM: Enemy Unknown – and their sequel, XCOM 2
Xenonauts

APPENDIX B: THE UNIVERSAL WORLD PROFILE (UWP)

The Cepheus Engine and most compatible OGL 2D6 Sci-Fi games use a shorthand method to easily record planetary data. This encoding uses pseudo-hexadecimal codes (as given below) for the numbers 10-16.

PSEUDO-HEXADECIMAL NOTATIONS	
RATING	LETTER
10	A
11	B
12	C
13	D
14	E
15	F
16	G

UNIVERSAL WORLD PROFILE

A UWP is a string of hexadecimal numbers presenting basic information about a world in eight digits.

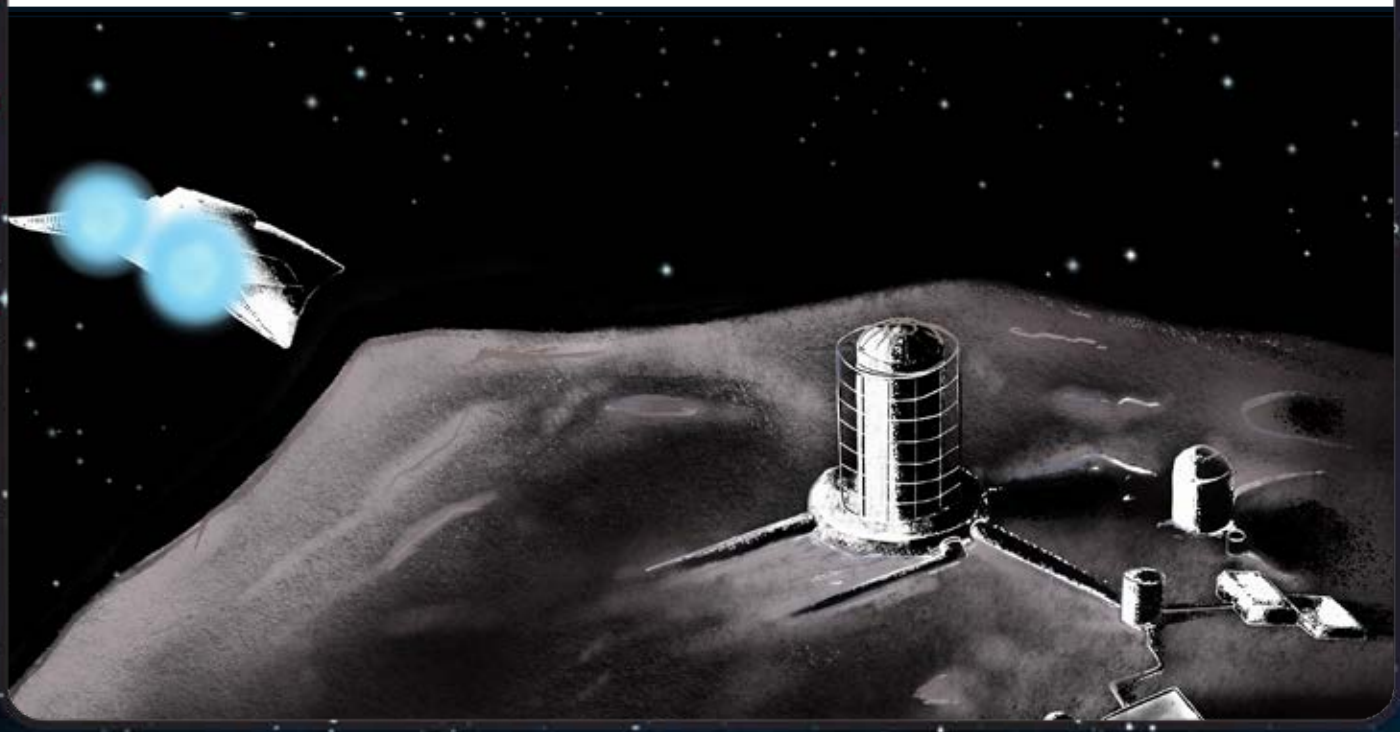
It lists the world's characteristics in the following order:

1. Starport type.
2. World size.
3. Atmosphere.
4. Dydrographics.
5. Population.
6. Government.
7. Law Level.
- \- (dash)
8. Tech level.

For example, the world of Frostfang from the World Generation chapter has the following characteristics:

1. Starport E (frontier starport).
2. World Size 6 (slightly smaller than Terra).
3. Atmosphere Code 1 (Trace)
4. Hydrographics of 7 indicates 70% of the surface is covered by water (in this case – ice).
5. Population 3 means 1,000 to 9,999 residents.
6. Government type 1 (Corporation)
7. Law Level 1 (minimal law enforcement)
8. Tech level 8 (as given in the Equipment chapter).

Frostfang has a UWP of E617311-8



APPENDIX C: CHEATING DEATH!

Death need not be final! In advanced societies, technology permits, at a significant economic cost, to attempt and bring the dead back to life.

CYBORG CONVERSION

Beginning at TL9, advanced technology can repair even a dead body, replacing dead tissues with plastic, chromium, and steel. Extremely invasive cybernetics can bring a dead or dying person back to life if their brain remains relatively intact and the body is not overly mangled. Only the best hospitals offer this treatment, typically requiring many physicians, nurses, and technicians to perform.

Cyborg conversion costs MCr6. As part of the conversion, any additional cybernetic implant may be installed at 75% of list price, since the massive cyber-surgery makes such installation easier. Note that dead bodies decompose with time and cyborg conversion cannot restore anyone who has been dead for over a month. However, a cryoberth can preserve a body indefinitely, so long as it remains functional. When performing cyborg conversion, the head surgeon makes a Medicine/INT 10+ throw. The result of the surgery depends on the Effect of this Medicine check, as shown on the table below.

CYBORG CONVERSION RESULTS

EFFECT	RESULT
-6	The character cannot be revived even with advanced cybernetics and remains dead. Nothing further can bring the character back to life.
-5	The cyborg arises from the dead but is violently and irreparably insane due to faulty wiring and programming. The character awakens and attacks everyone next to them with murderous rage. The character cannot be subdued and later repaired. They must be terminated.
-2 to -4	The procedure fails. Further cyborg conversion or bio reconstruction attempts can be made, but at a DM-2 and double the cost. Negative DMs and cost multiplication are cumulative for repeated attempts, e.g., a third cyborg conversion attempt after failing twice will suffer DM-4 and will cost four times as much.
-1	The character returns to life with 1 point of Lifeblood! However, their body did not recover well from the cybernetic implantation process, which causes severe side effects. Roll 1D6: 1-2, the character loses their memory; 3-4, the character is only partially alive and suffers from cybernetic mismatch; 5-6, the character will occasionally suffer from sudden and unexpected fits of murderous rage. See below for descriptions of these states. Further surgeries and healing attempts follow the standard healing rules.
0	The character returns to life with 1 point of Lifeblood, though they still bear marks of their terrible injury. Roll 1D6: 1-2 the character suffers from partial memory loss; 3-4, the character will have severe recurring nightmares; 5-6, the character will undergo a profound personality change. Further surgery and healing follow the standard healing rules.
1 to 5	The character returns to life with 1 point of Lifeblood and will recover fully with proper medical care. However, they suffer moderate damage due to imperfect cyber-implantation. Roll 1D6: 1-2, the character will be sickly; 3-4, the character suffers physical characteristic loss; 5-6, the character suffers from shaking. Further surgery and healing follow the standard healing rules.
6+	The character is lucky and awakens with full Lifeblood and Stamina and no perceptible side effects. No further healing required!

General DMs: Apply any relevant modifiers to all cyborg conversion attempts.

CYBORG CONVERSION MODIFIERS	
CIRCUMSTANCE	DM
TL9 and TL10	DM-2
TL14+	DM+2
Per previous cyborg conversion	DM-2
More than 24 hours have passed since the character's death	DM-1
More than one week has passed since the character's death	DM-3
More than a month has passed since the character's death	Automatic failure
Character's body was cryogenically preserved and thawed out	DM-2

CYBORG CONVERSION SIDE EFFECTS

Here is a list of the effects of the various side effects caused by less-than-perfect cybernetic conversions.

Cybernetic Mismatch: The character is neither alive nor dead, and teeters constantly on death's door. They are kept alive only by cybernetics, whilst simultaneously suffering from cybernetic rejection. The character suffers DM-2 to all throws and only has half of their movement rate: in most cases, 5 meters per action. Every month, the character must roll END 8+ or die from cybernetic rejection.

Memory Loss, Full: The character suffers from complete amnesia, though they retain basic life skills and partial adventuring skills. Halve the character's EDU score, rounding down to a minimum of 1. Also, for each skill, throw INT 6+ or lose one level of the skill; a skill at level-0 reduced in such a manner is lost.

Memory Loss, Partial: The character loses part of their memory but retains a general idea of their identity, as well as most skills. The character loses 1D3 points of EDU to a minimum of 1. Randomly choose one of the character's skills that are at level-1 or higher: reduce it to level-0.

Personality Change: The character retains their memories. However, their personality has changed dramatically and profoundly. The player and Referee should negotiate this change. We suggest using some of the random NPC motivation tables found in the Social Encounters chapter to guide the process.

Physical Characteristic Loss: The character did not heal properly and now suffers from reduced abilities. Roll 1D: 1-2, the character loses 1d3 points of Strength; 3-4, the character loses 1D3 points of Dexterity; 5-6, the character loses 1D3 points of Endurance. The affected characteristic cannot be reduced below 1.

Recurring Nightmares: The character suffers from traumatic memories of their otherwise lethal injuries. They suffer from negative emotions and severe recurring nightmares every night. In addition to being wildly unpleasant, these nightmares prevent healthy sleep. The character suffers from severe insomnia, leading to constant Fatigue. At the Referee's choice, this may be mitigated by stimulants – which, in turn, may be addictive.

Sickly: The character's body did not fully heal from the lethal trauma it suffered, as well as the cybernetic conversion. Their metabolism is now far weaker. Halve the character's Stamina score, rounding down to a minimum of 1. The character also suffers DM-2 to all rolls made to resist disease, poison, radiation, or any other biological effect.

Shaking: The character's cybernetic neural wiring and servos are not well-calibrated. They suffer from constant hand tremors, causing a DM-1 to skill and characteristic throws, as well as any other throws requiring steady hands.

Sudden Murderous Rage: The character awakens normally, but the cybernetic systems will develop critical and dangerous glitches. Whenever the Referee wishes, the character must throw INT 8+ or END 8+ (whichever is better) or fly into a murderous rage lasting 2D combat rounds, doing their best to kill any living or mechanical being in reach. After this violent break, they will return to normal and will not remember anything from their rage. We recommend that the possibility of a Sudden Murderous Rage might come up every week, or month, or whenever the character is under high stress situations, and something related to their trauma occurs. Referees are not encouraged to be particularly merciful…

BIO RECONSTRUCTION

At Tech Level 16, extremely advanced medical technology can perform miracles unimaginable by less advanced societies. By applying cutting-edge biotechnology, an advanced hospital or laboratory can grow back a dead body and restore it to full function. The only requirement for Bio Reconstruction is that the dead character's brain must be preserved in an intact enough state. This allows for the scanning of the brain's neural pathways for imprinting in the new body. Bio Reconstruction is a monstrously expensive process, and it requires an advanced and full-scale hospital with access to the best scientific facilities and a large crew of experts in medicine and biology. Unlike cyborg conversion, however, this process is far less invasive and has a better chance of success.

The procedure costs MCr60 – as much as a small starship. In most cases, a patron of some sort will fund

the procedure, usually in return to massive favors owed by the reborn subject. Note that dead bodies decompose with time and even this advanced method of bio reconstruction cannot restore a person dead for over a year; a cryotube can, however, preserve a body indefinitely. When performing the bio reconstruction, the head scientist makes a Medicine/EDU 10+ check. The result depends on the Effect of this Medicine check, as shown on the table below.

BIO RECONSTRUCTION RESULTS

EFFECT	RESULT
-6	The attempt to revive the character failed, and no further attempts will succeed. The character is dead.
-5	The procedure fails. Further Bio Reconstruction attempts may be made, but at DM-2 and double the cost. Negative DMs and cost multiplication are cumulative for repeated attempts, e.g., a third Bio Reconstruction attempt after failing twice will suffer DM-4 and will cost four times as much.
-4 to -1	The character returns to life with 1 point of Lifeblood but suffers biological degradation. They will require 1D weeks of rest after emerging from the vat. Roll 1D: 1-4, the character loses their memory; 5, the character suffers from an incurable malignant illness; 6, the character will suffer from progressive dementia due to faulty brain reconstruction and imprinting. Further surgery and healing follow standard rules.
0	The character returns to life with 1 point of Lifeblood, though not perfectly so. Roll 1D: 1-2 the character suffers from partial memory loss; 3-4, the character's appearance changes radically; 5-6, the character undergoes a profound personality change. Further surgery and healing follow standard rules.
1 to 5	The character has been regenerated to 1 point of Lifeblood and will recover normally with medical care. Roll 1D for side effects: 1-2, the character suffers from a significant but non-debilitating disfigurement; 3-4, the character's appearance changes partially; 5-6, the character undergoes a physical characteristic change. Further surgery and healing follow standard rules.
6 or more	The character is lucky and awakens with full Lifeblood and Stamina, and no perceptible side effects.

General DMs: Apply any relevant modifiers to all bio reconstruction attempts.

BIO RECONSTRUCTION MODIFIERS

CIRCUMSTANCE	DM
Per previous successful cyborg conversion	-2
Per previous successful bio reconstruction	-1
More than a week has passed since the character's death	-1
More than one month has passed since the character's death	-3
More than a year has passed since the character's death	Automatic failure
Character's body was cryogenically preserved and thawed out	-2

BIO RECONSTRUCTION SIDE EFFECTS

These are the various side effects and problems caused by partially successful Bio Reconstructions:

Appearance Change, Radical: The character looks like a completely new person and is unrecognizable by anything short of a genetic test. Even the fingerprints change. The exact details of this change are up to the Referee and player.

Appearance Change, Partial: The character looks similar to their old self, but not exactly so. People who know the character may attempt to recognize them on a successful INT 6+ throw. Other details and consequences of this change are up to the Referee and player.

Disfigurement: The character suffers a terrible disfigurement that no surgery may correct. It is not debilitating but is ghastly to look at and incurs DM-2 to any skill or characteristic throws related to diplomacy or persuasion. However, the character gains a DM+2

to any roll related to intimidation. The character is also easily recognizable.

Malignant Illness: Faulty genetic reconstruction causes a persistent, incurable malignancy in the character's body. Halve all physical Characteristics and round down to a minimum of 1. Furthermore, each month the character must throw END 8+ or die from the illness. Bio reconstruction, cyborg conversion, or any other procedure cannot restore a character who died in such a way. This is a good opportunity to tie up any loose ends from the character's previous life. They are living on borrowed time.

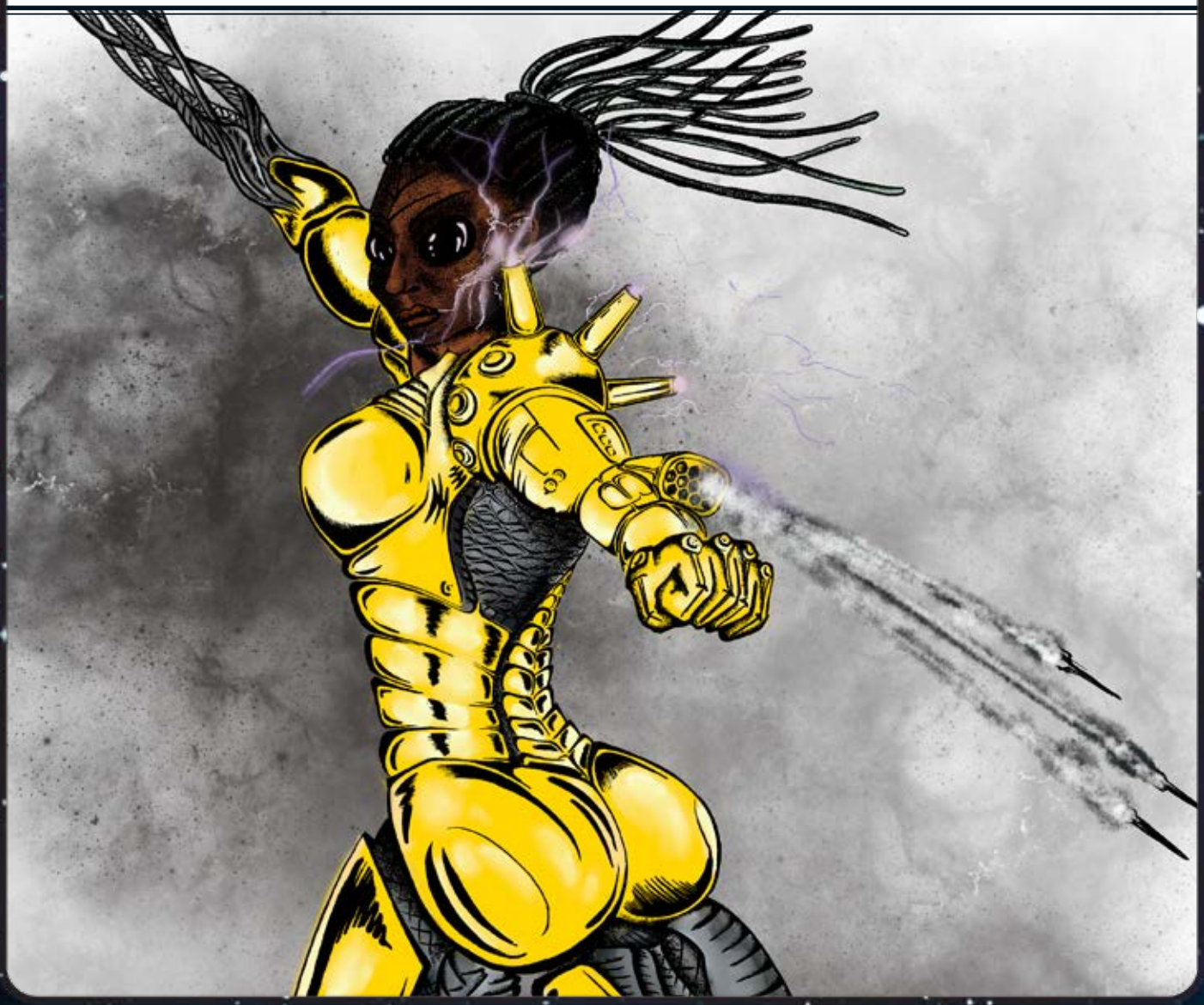
Memory Loss, Full: The character suffers from complete amnesia, though they retain basic life skills and partial adventuring skills. Halve the character's EDU score, rounding down to a minimum of 1. Also, for each skill, throw INT 6+ or lose one level of the skill; a skill at level-0 reduced in such a manner is lost.

Memory Loss, Partial: The character loses part of their memory but retains a general idea of their identity, as well as most skills. The character loses 1d3 points of EDU to a minimum of 1. Randomly choose one of the character's skills that are at level-1 or higher: reduce it to level-0.

Personality Change: The character retains their memories. However, their personality has changed dramatically and profoundly. The player and Referee should negotiate this change. We suggest using some of the random NPC motivation tables found in the Social Encounters chapter to guide the process.

Physical Characteristic Change: The character's new body grows differently than the last one. Roll 2D three times and assign the values to the three physical characteristics, STR, DEX, and END, as desired.

Progressive Dementia: The character's brain was not properly restored and will deteriorate with time. Each month, the character loses 1D3 points of INT and 1D3 points of EDU. When any of these characteristics reaches zero or below, the character falls into a vegetative state and will die within 1D months. If both fall below zero in the same month, the character suffers a stroke and dies immediately.



APPENDIX D: ALIENS

Grand interstellar drama often calls for sentient aliens. Unlike the unfathomable alien life of a hard-science universe, the following three species follow common space-opera tropes. They are humanoid, reminiscent of Terran animals, and in one case – inspired by pop-culture UFO lore. These aliens are close enough to humans to be playable without much work.

Under these rules, aliens use the same careers as humans do, but have alien traits that set them apart from humanity.

For more detailed alien species and cultures, as well as advanced alien character generation, we recommend our grand space-opera setting. Terra Arisen, available from Stellagama Publishing in PDF and print-on-demand formats.

GRAYS

Short in stature but intellectually powerful, the gray aliens are a staple of science fiction and popular culture. Common lore has them flying in saucers and abducting people for horrific scientific experimentation. All grays are biologically female. They reproduce asexually, each daughter being a clone of her mother with minimal variation. Curiosity drives the grays and they value rationality; they are excellent scientists and strategists. They are, however, poor fighters, and prefer to use technology and the slave races they have subjugated to fight their battles.

Grays have the following traits:

- Injured or sick grays require a medical facility (or tools) of TL10 or better, otherwise they suffer DM-2 to any related medical throws.
- Grays do not need to acclimatize to low-gravity environments.
- At character generation, grays roll 1D for STR and 1D for END, but 3D for DEX and INT.

REPTILOIDS

These warm-blooded reptile-like aliens bring the might of the monitor lizard and the agility of the gecko to the stars. Males are taller and stronger than humans, while females are human-sized. Civilization transformed the male reptiloid's murderous territorial instincts into a less destructive, but always present, competitive streak. A male reptiloid lives and dies for glory - constantly proving his mettle to his peers and vying for higher spots in his social pecking order. Females, on the other hand, consider the big picture issues important to reptiloid tribal society: government, commerce, and technical development. The males, and to a lesser degree the females, are excellent warriors, though many try their hand in commerce (and piracy!) as well.

Reptiloids have the following traits:

- See twice as far as humans in low-light conditions.
- DM+2 to all Athletics throws to climb. May cling to walls and ceilings on a successful throw of Athletics 8+ per round of clinging.
- Reptiloids don't suffer hourly damage from hot weather exposure up to 50°C.
- Males enjoy a +1 bonus to STR and a penalty of -2 to INT; females enjoy a +1 bonus to EDU and a penalty of -2 to STR. This cannot bring INT or STR to less than 1.

INSECTOIDS

The Insectoids were once the pests living in the detritus of another more advanced civilization. But that civilization fell, and the Insectoids soon thrived in their precursors' ruins. Opportunistic and hardy, these bug-folk quickly learned how to bring their world's old masters' technology back to life. This has enabled them to skip many millennia of cultural evolution. They are expert tinkers, peddlers of trinkets, and boundless opportunists. Terrans may deride them as space cockroaches, but still enjoy their trade and diplomatic neutrality, nonetheless.

Insectoids have the following traits:

- Fast-growing. Start their career at the age of 10 and start aging after their third term, at the age of 22. May use career tables for up to 5 terms.
- 2 points of natural armor. Non-cumulative with worn armor heavier than Jack.
- Insectoids do not need to acclimatize to low-gravity environments.
- -2 penalty to EDU. This cannot bring EDU to less than 1.
- DM+2 to any throw to avoid poison or disease; DM+2 to any throw to cure an insectoid from a poison or a disease.
- As an action, an insectoid may throw Athletics 6+ to jump 6m in any direction.

APPENDIX E: LEGAL

IMPORTANT NOTICE

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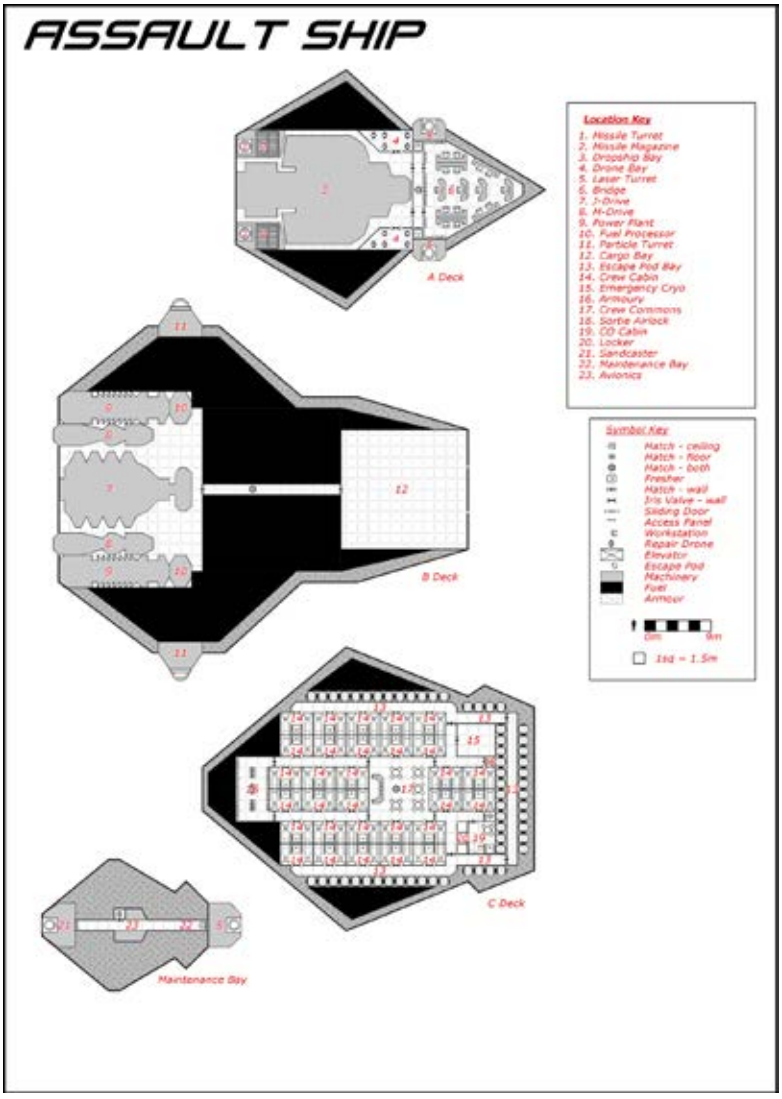
APPENDIX F: SCHEMATICS

ASSAULT SHIP



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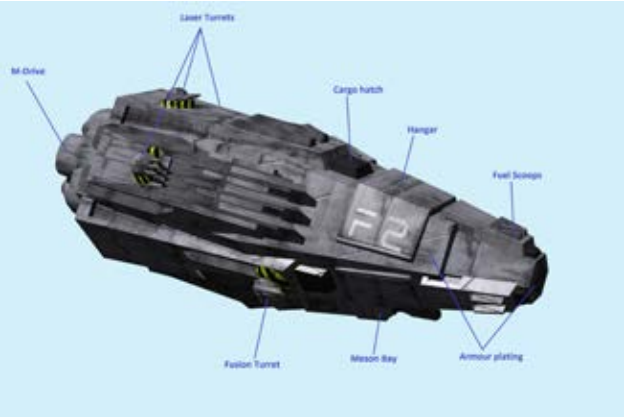
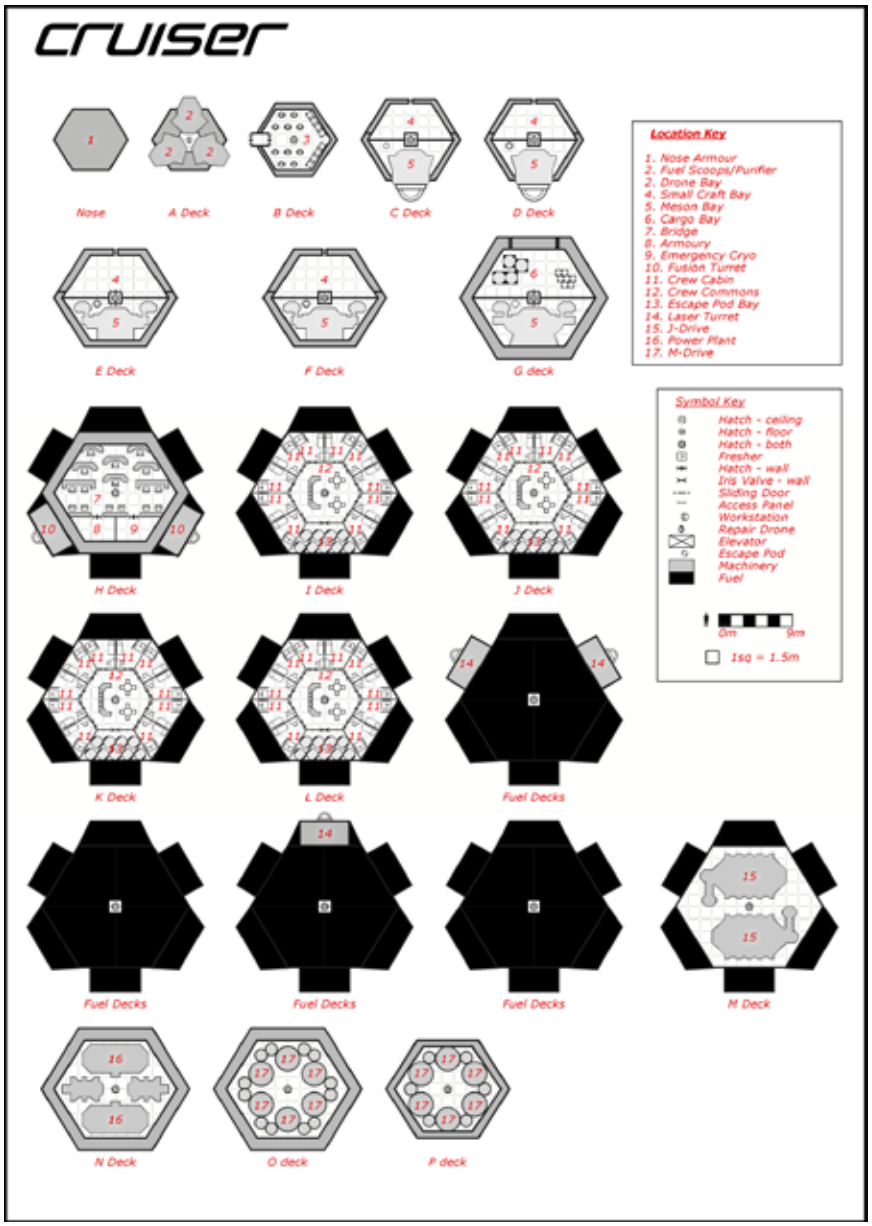
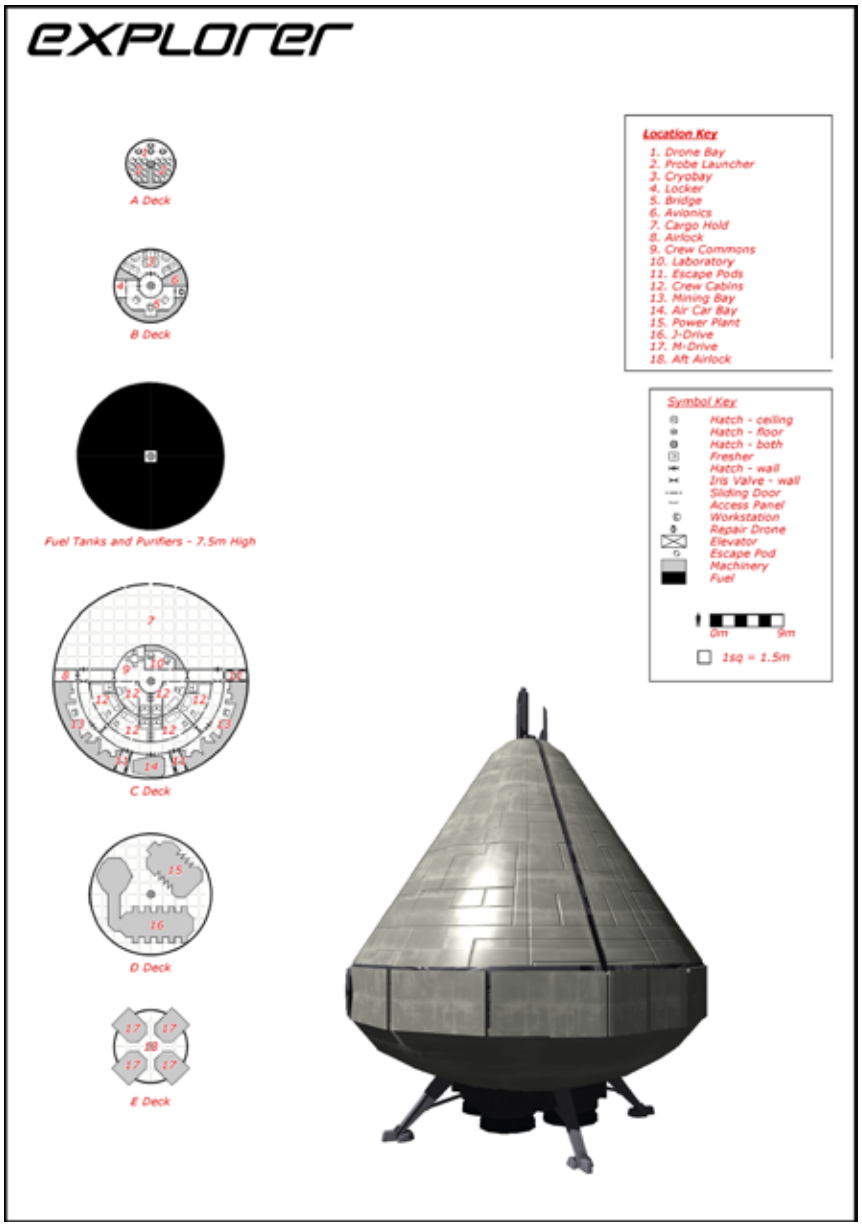

Laser Turrets
M-Drive
Cargo hatch
Hangar
Fuel Scoops
Fusion Turret
Meson Bay
Armour plating

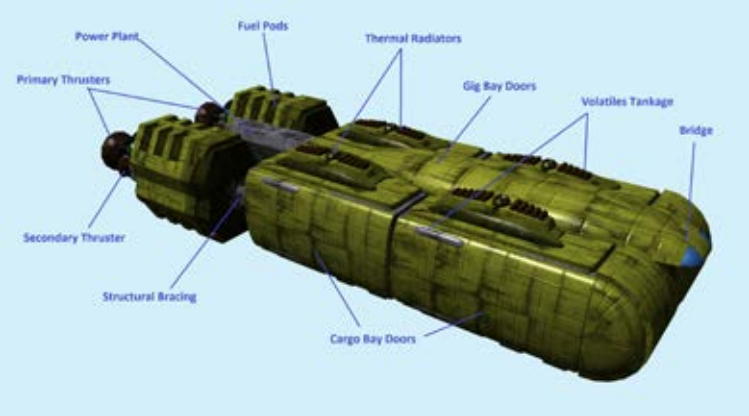

cruiser
Nose
A Deck
B Deck
C Deck
D Deck
E Deck
F Deck
G deck
H Deck
I Deck
J Deck
K Deck
L Deck
Fuel Decks
Fuel Decks
Fuel Decks
Fuel Decks
M Deck
N Deck
O deck
P deck
Location Key
1. Nose Armour
2. Fuel Scoops/Purifier
2. Drone Bay
4. Small Craft Bay
5. Meson Bay
6. Cargo Bay
7. Bridge
8. Armoury
9. Emergency Cryo
10. Fusion Turret
11. Crew Cabin
12. Crew Commons
13. Escape Pod Bay
14. Laser Turret
15. J-Drive
16. Power Plant
17. M-Drive
Symbol Key
Hatch - ceiling
Hatch - floor
Hatch - both
Fresher
Hatch - wall
Iris Valve - wall
Sliding Door
Access Panel
Workstation
Repair Drone
Elevator
Escape Pod
Machinery
Fuel
0m
5m
1sq = 1.5m

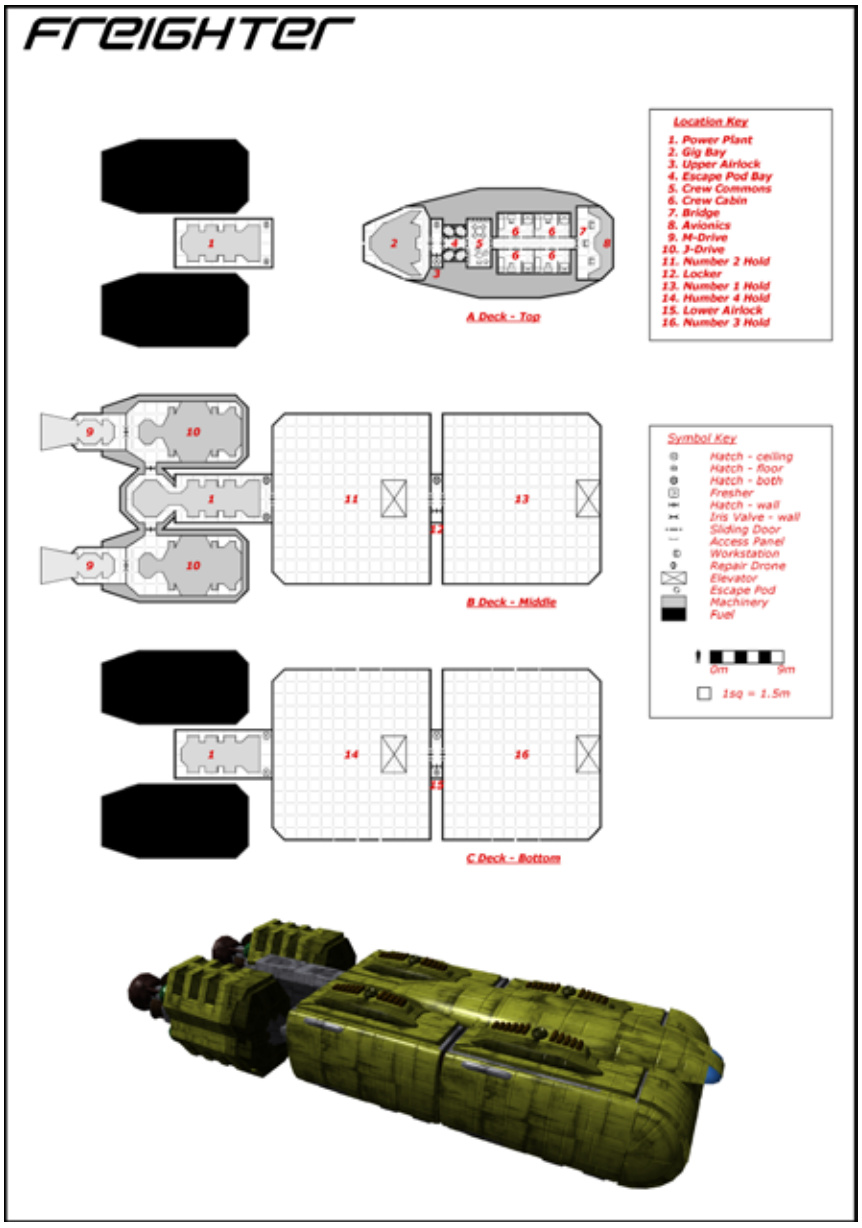
EXPLORER

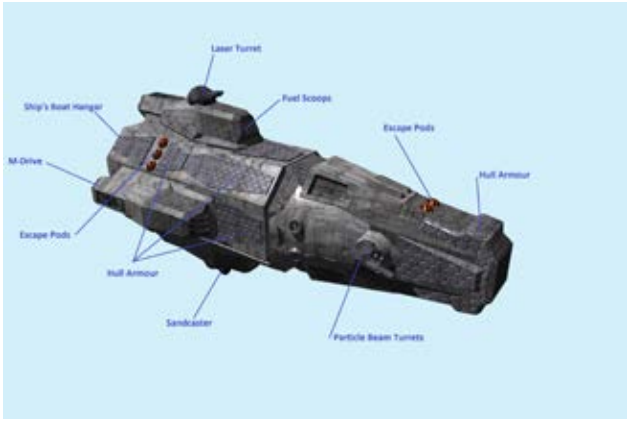
Probe Launch Rails
Nose Airlock
Fuel Scoops
Main Airlock
Air Car Bay Doors
Mining Bay Doors
M-Drive
Landing Struts
Aft Airlock

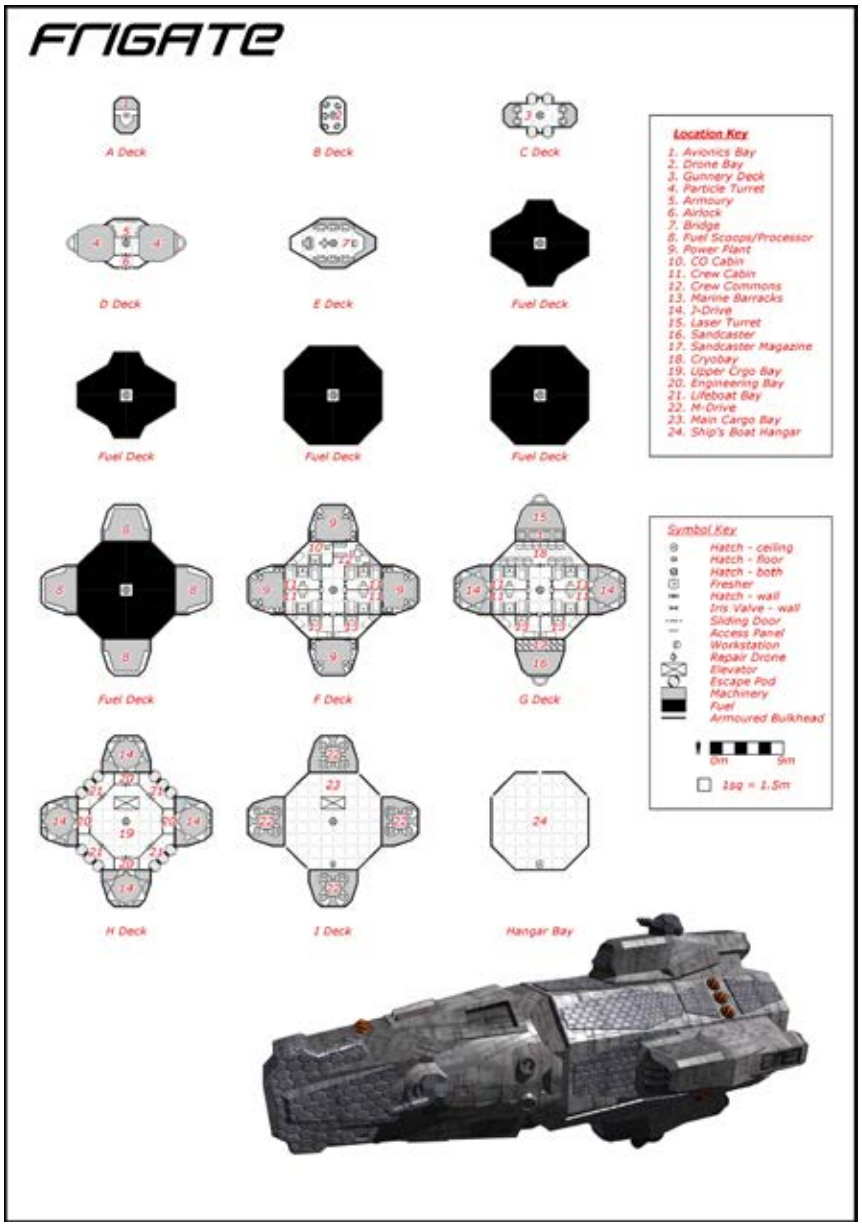

explorer
A Deck
B Deck
Fuel Tanks and Purifiers - 7.5m High
C Deck
D Deck
E Deck
Location Key
1. Drone Bay
2. Probe Launcher
3. Cryobay
4. Locker
5. Bridge
6. Avionics
7. Cargo Hold
8. Airlock
9. Crew Commons
10. Laboratory
11. Escape Pods
12. Crew Cabins
13. Mining Bay
14. Air Car Bay
15. Power Plant
16. J-Drive
17. M-Drive
18. Aft Airlock
Symbol Key
Hatch - ceiling
Hatch - floor
Hatch - both
Fresher
Hatch - wall
Iris Valve - wall
Sliding Door
Access Panel
Workstation
Repair Drone
Elevator
Escape Pod
Machinery
Fuel
0m
5m
1sq = 1.5m

FREIGHTER

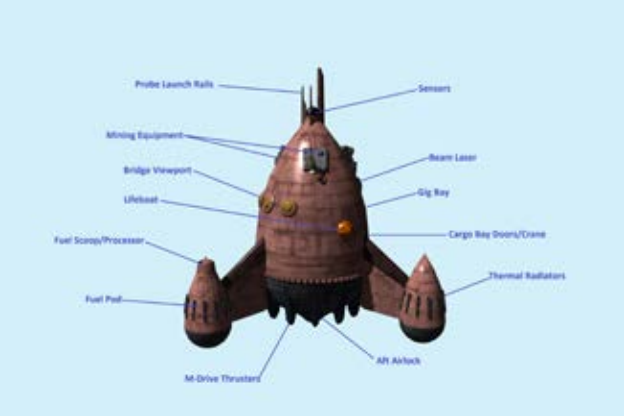

Power Plant
Fuel Pods
Thermal Radiators
Primary Thrusters
Gig Bay Doors
Volatiles Tankage
Bridge
Secondary Thruster
Structural Bracing
Cargo Bay Doors

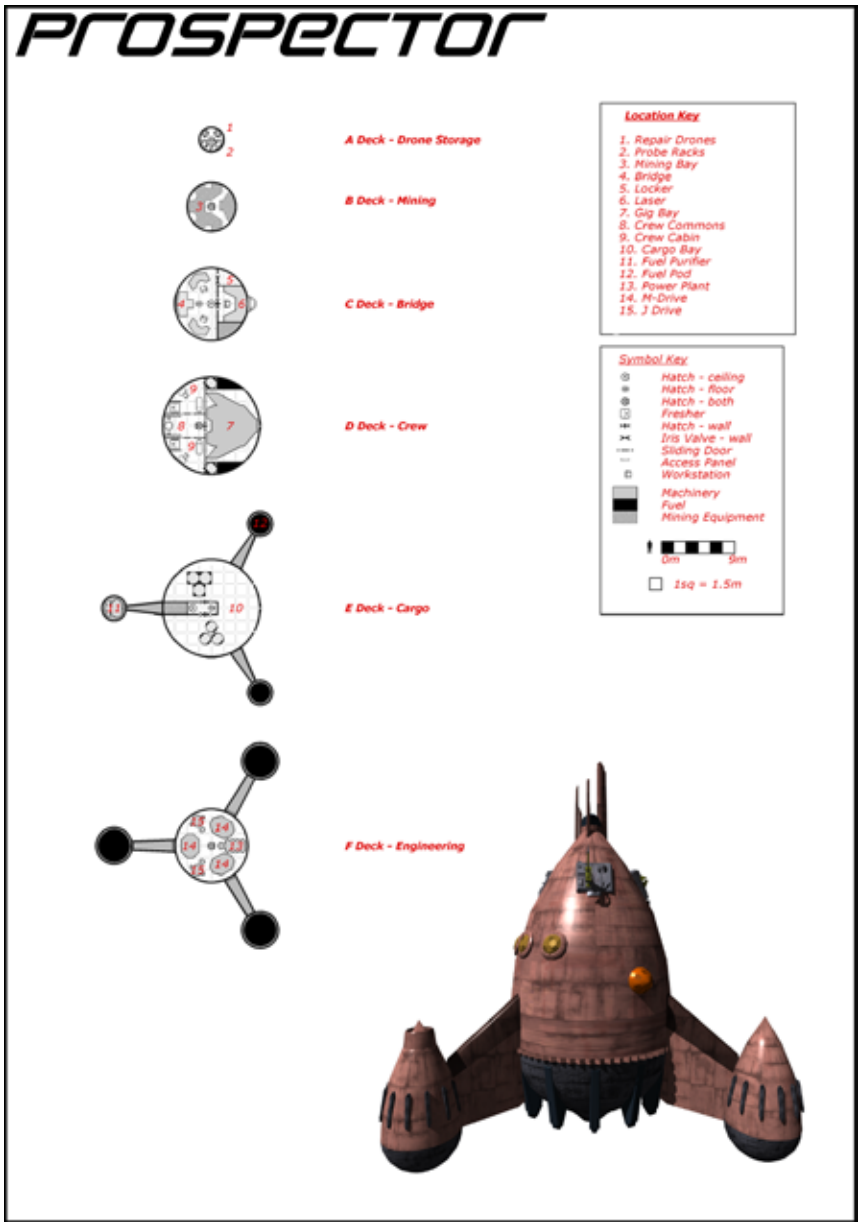

FREIGHTER
Location Key
1. Power Plant
2. Gig Bay
3. Upper Airlock
4. Escape Pod Bay
5. Crew Commons
6. Crew Cabin
7. Bridge
8. Avionics
9. M-Drive
10. J-Drive
11. Number 2 Hold
12. Locker
13. Number 1 Hold
14. Number 4 Hold
15. Lower Airlock
16. Number 3 Hold
A Deck - Top
B Deck - Middle
C Deck - Bottom
Symbol Key
Hatch - ceiling
Hatch - floor
Hatch - both
Fresher
Hatch - wall
Iris Valve - wall
Sliding Door
Access Panel
Workstation
Repair Drone
Elevator
Escape Pod
Machinery
Fuel
0m
5m
1sq = 1.5m

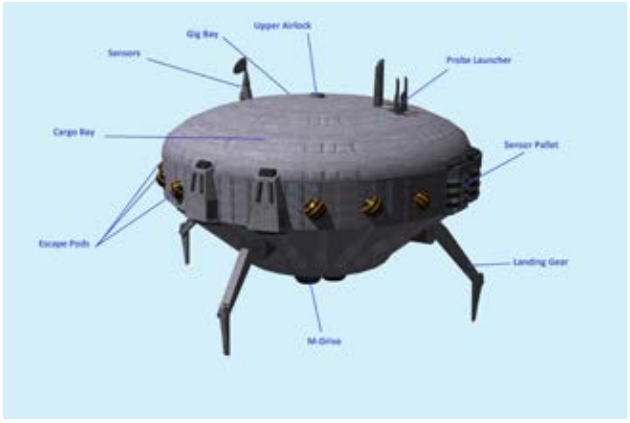

Laser Turret
Fuel Scoops
Ship's Boat Hangar
Escape Pods
M-Drive
Hull Armour
Escape Pods
Hull Armour
Sandcaster
Particle Beam Turrets

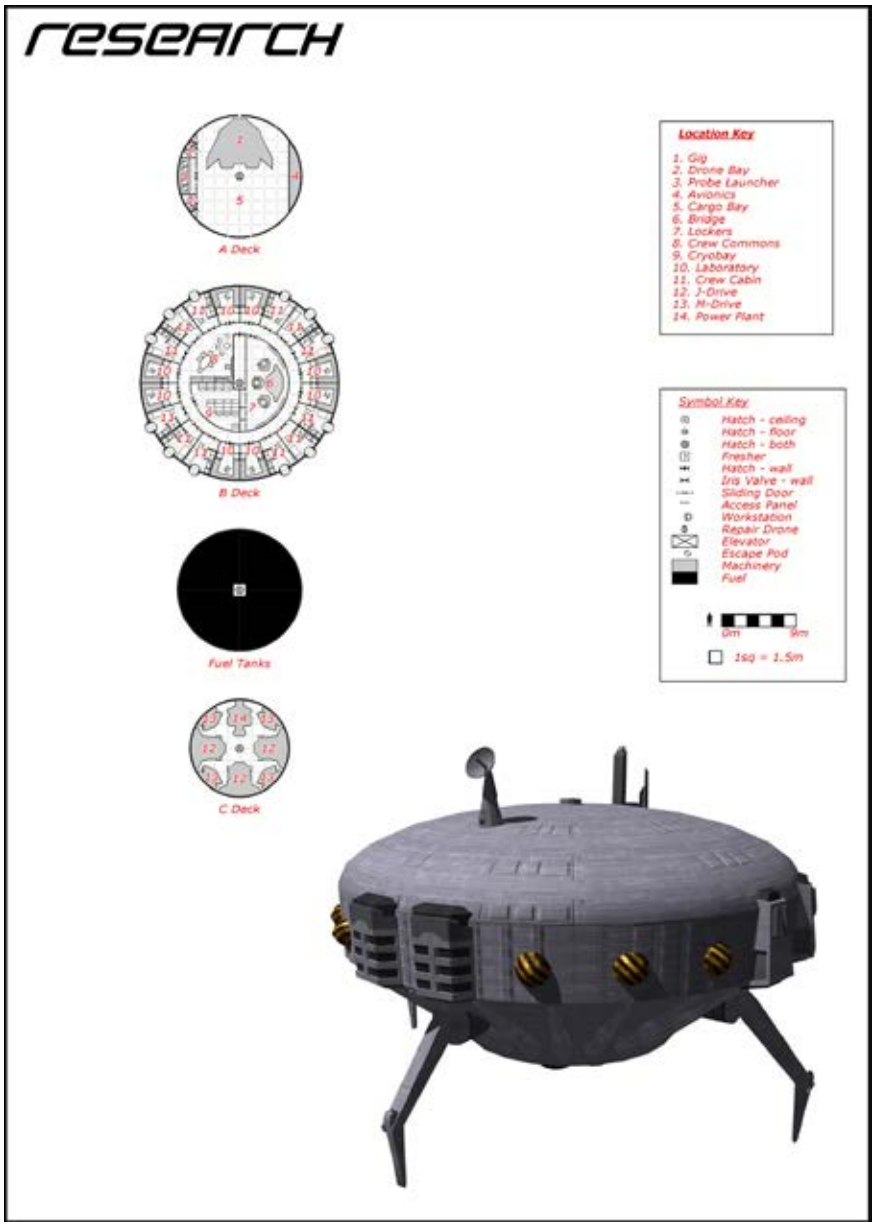

FRIGATE
A Deck
B Deck
C Deck
D Deck
E Deck
Fuel Deck
Fuel Deck
Fuel Deck
Fuel Deck
Fuel Deck
F Deck
G Deck
H Deck
I Deck
Hangar Bay
Location Key
1. Avionics Bay
2. Drone Bay
3. Gunnery Deck
4. Particle Turret
5. Armoury
6. Airlock
7. Bridge
8. Fuel Scoops/Processor
9. Power Plant
10. CO Cabin
11. Crew Cabin
12. Crew Commons
13. Marine Barracks
14. J-Drive
15. Laser Turret
16. Sandcaster
17. Sandcaster Magazine
18. Cryobay
19. Upper Cargo Bay
20. Engineering Bay
21. Lifeboat Bay
22. M-Drive
23. Main Cargo Bay
24. Ship's Boat Hangar
Symbol Key
Hatch - ceiling
Hatch - floor
Hatch - both
Fresher
Hatch - wall
Iris Valve - wall
Sliding Door
Access Panel
Workstation
Repair Drone
Elevator
Escape Pod
Machinery
Fuel
Armoured Bulkhead
0m
5m
1sq = 1.5m

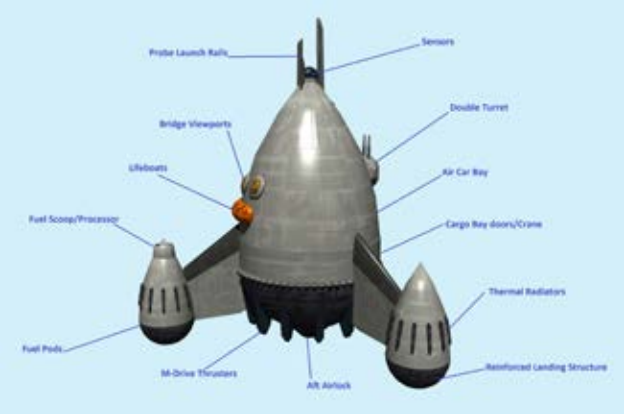
PROSPECTOR

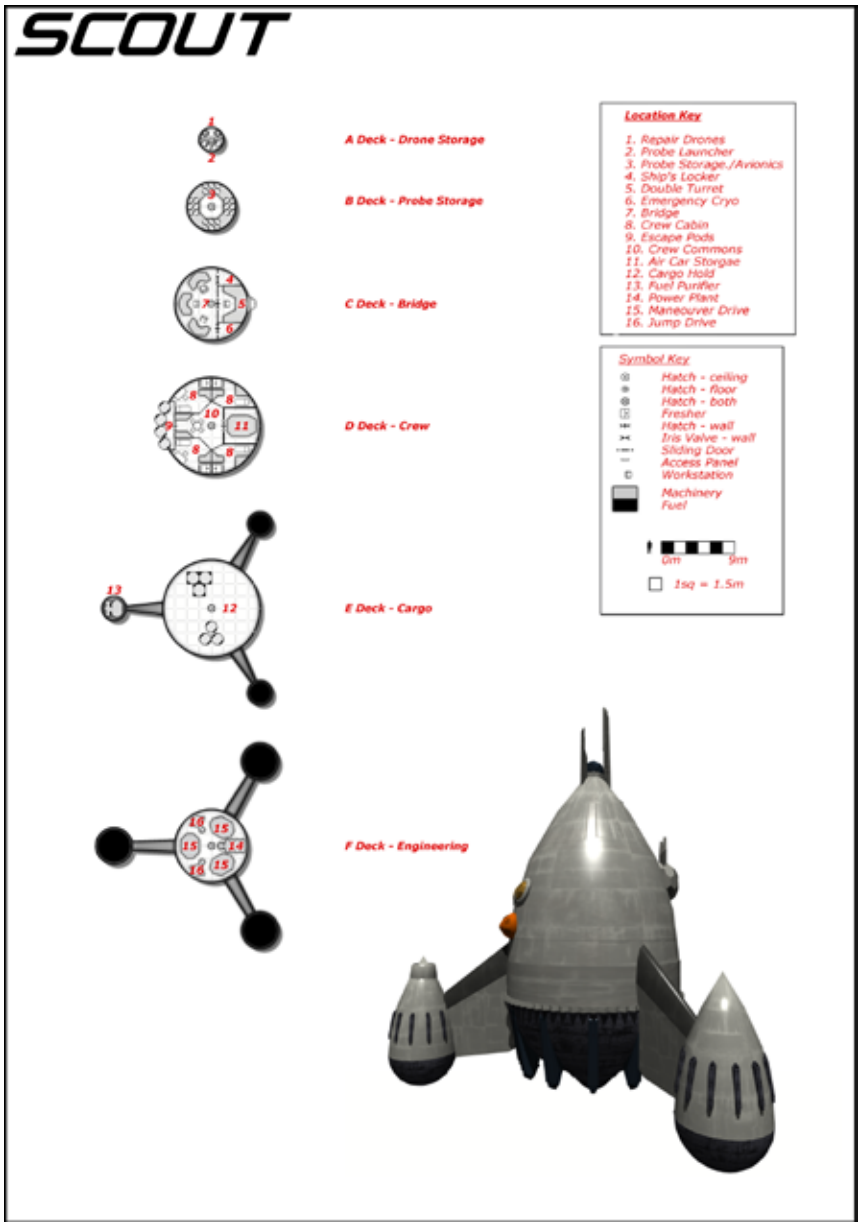

Probe Launch Rails
Sensors
Mining Equipment
Beam Laser
Bridge Viewport
Gig Bay
Lifeboat
Cargo Bay Doors/Crane
Fuel Scoop/Processor
Thermal Radiators
Fuel Pod
Aft Airlock
M-Drive Thrusters


PROSPECTOR
A Deck - Drone Storage
B Deck - Mining
C Deck - Bridge
D Deck - Crew
E Deck - Cargo
F Deck - Engineering
Location Key
1. Repair Drones
2. Probe Racks
3. Mining Bay
4. Bridge
5. Locker
6. Laser
7. Gig Bay
8. Crew Commons
9. Crew Cabin
10. Cargo Bay
11. Fuel Purifier
12. Fuel Pod
13. Power Plant
14. M-Drive
15. J Drive
Symbol Key
Hatch - ceiling
Hatch - floor
Hatch - both
Fresher
Hatch - wall
Iris Valve - wall
Sliding Door
Access Panel
Workstation
Machinery
Fuel
Mining Equipment
0m
5m
1sq = 1.5m

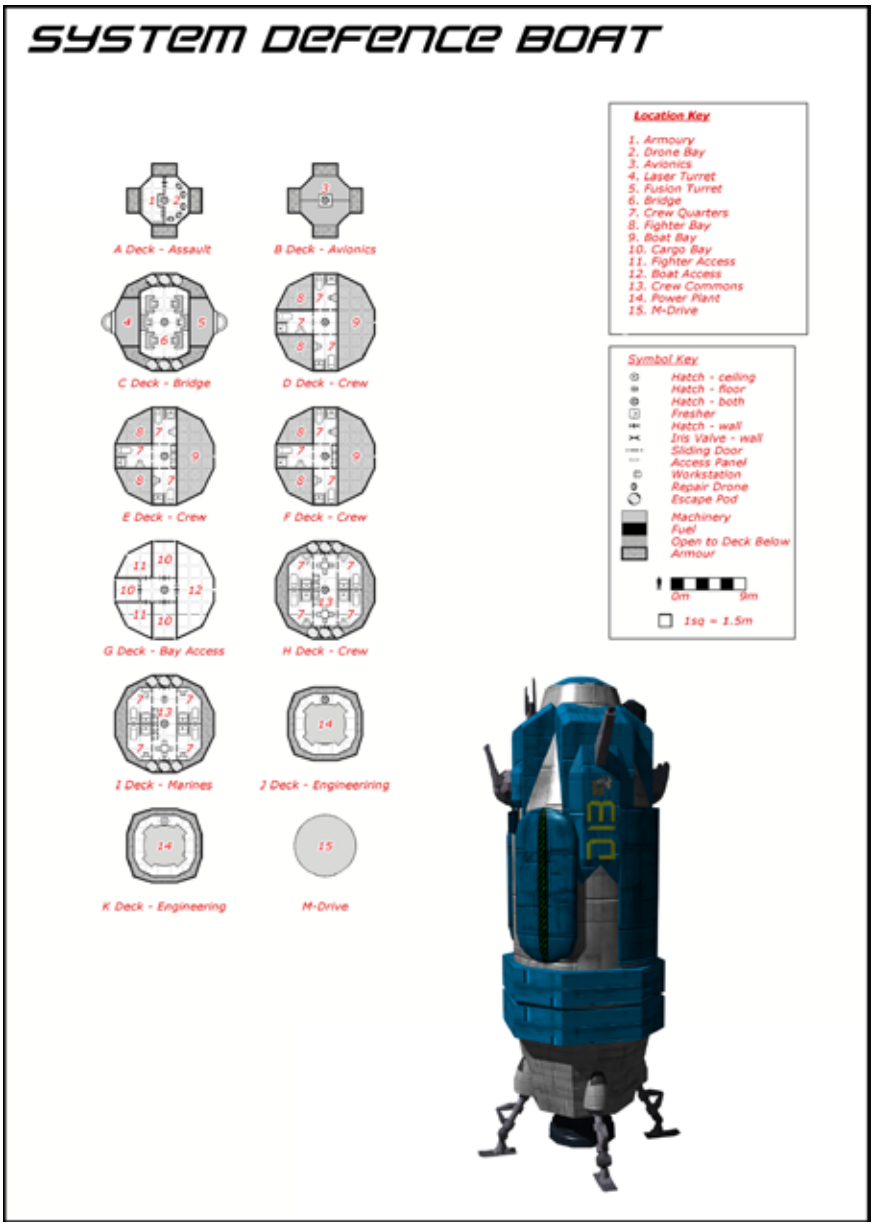

Gig Bay
Upper Airlock
Sensors
Probe Launcher
Cargo Bay
Sensor Pallet
Escape Pods
Landing Gear
M-Drive


research
A Deck
B Deck
Fuel Tanks
C Deck
Location Key
1. Gig
2. Drone Bay
3. Probe Launcher
4. Avionics
5. Cargo Bay
6. Bridge
7. Lockers
8. Crew Commons
9. Cryobay
10. Laboratory
11. Crew Cabin
12. J-Drive
13. M-Drive
14. Power Plant
Symbol Key
Hatch - ceiling
Hatch - floor
Hatch - both
Fresher
Hatch - wall
Iris Valve - wall
Sliding Door
Access Panel
Workstation
Repair Drone
Elevator
Escape Pod
Machinery
Fuel
0m
9m
1sq = 1.5m

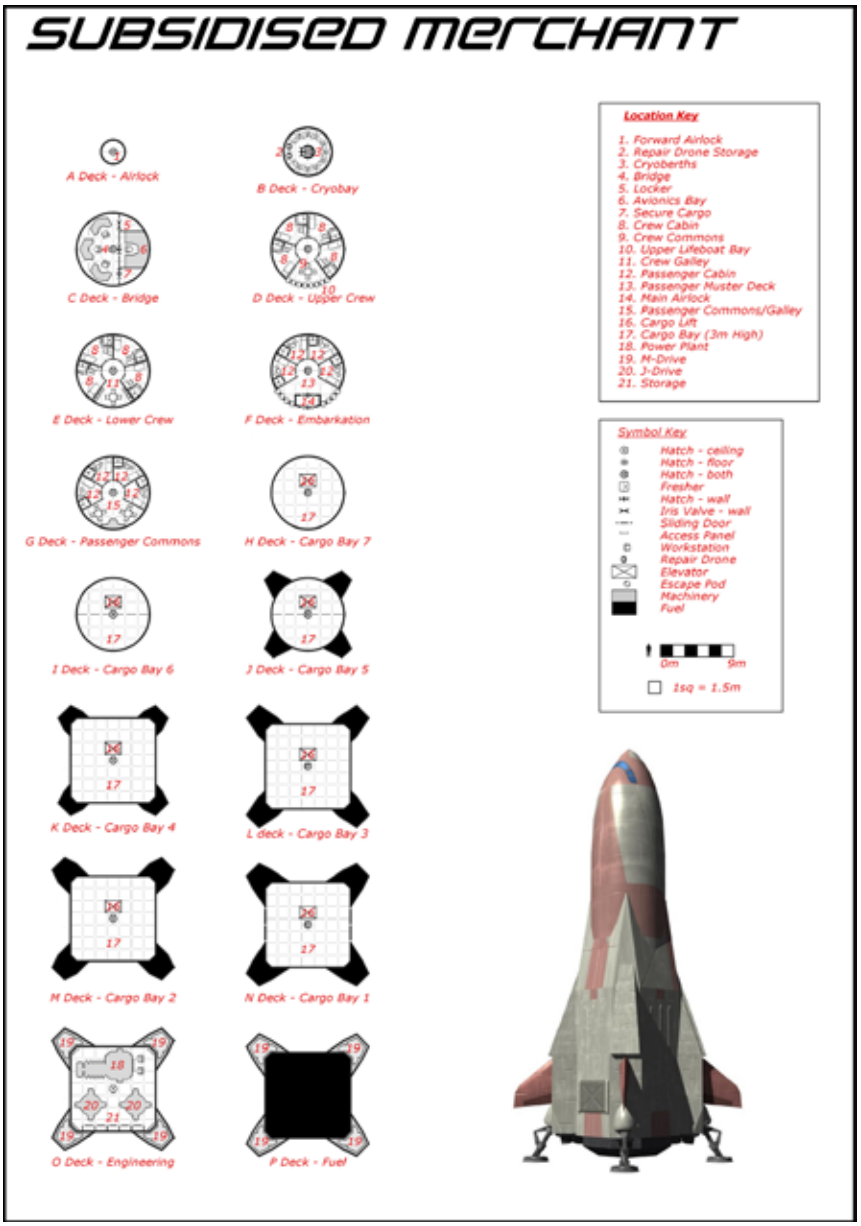

Probe Launch Rails
Sensors
Double Turret
Bridge Viewports
Lifeboats
Air Car Bay
Fuel Scoop/Processor
Cargo Bay doors/Crane
Thermal Radiators
Fuel Pods
M-Drive Thrusters
Aft Airlock
Reinforced Landing Structure

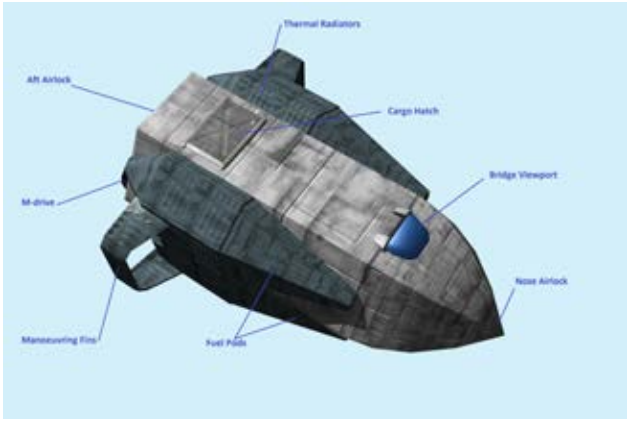

SCOUT
A Deck - Drone Storage
B Deck - Probe Storage
C Deck - Bridge
D Deck - Crew
E Deck - Cargo
F Deck - Engineering
Location Key
1. Repair Drones
2. Probe Launcher
3. Probe Storage./Avionics
4. Ship's Locker
5. Double Turret
6. Emergency Cryo
7. Bridge
8. Crew Cabin
9. Escape Pods
10. Crew Commons
11. Air Car Storgae
12. Cargo Hold
13. Fuel Purifier
14. Power Plant
15. Maneouver Drive
16. Jump Drive
Symbol Key
Hatch - ceiling
Hatch - floor
Hatch - both
Fresher
Hatch - wall
Iris Valve - wall
Sliding Door
Access Panel
Workstation
Machinery
Fuel
0m
5m
1sq = 1.5m

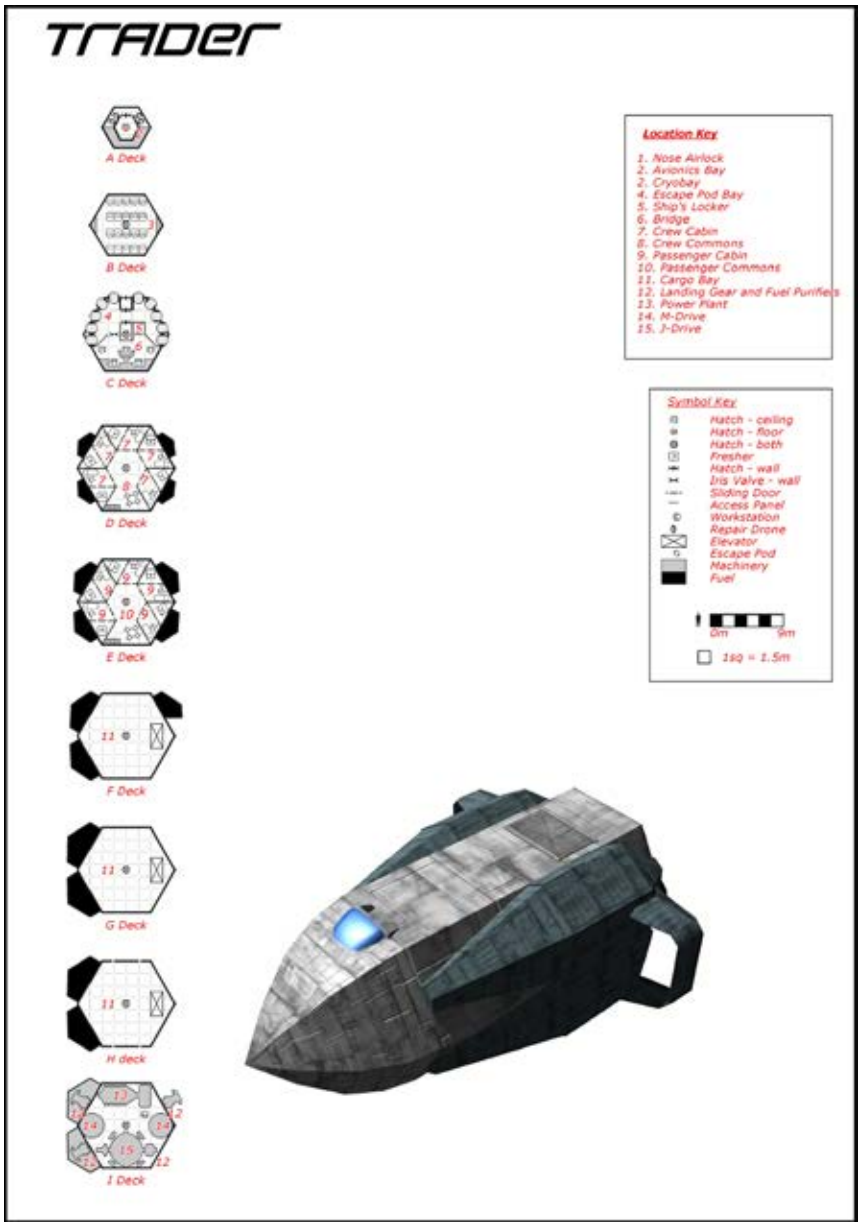
SYSTEM DEFENSE BOAT

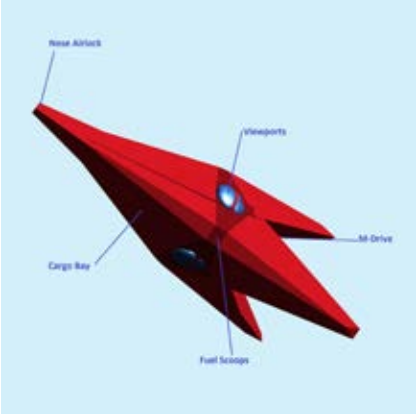


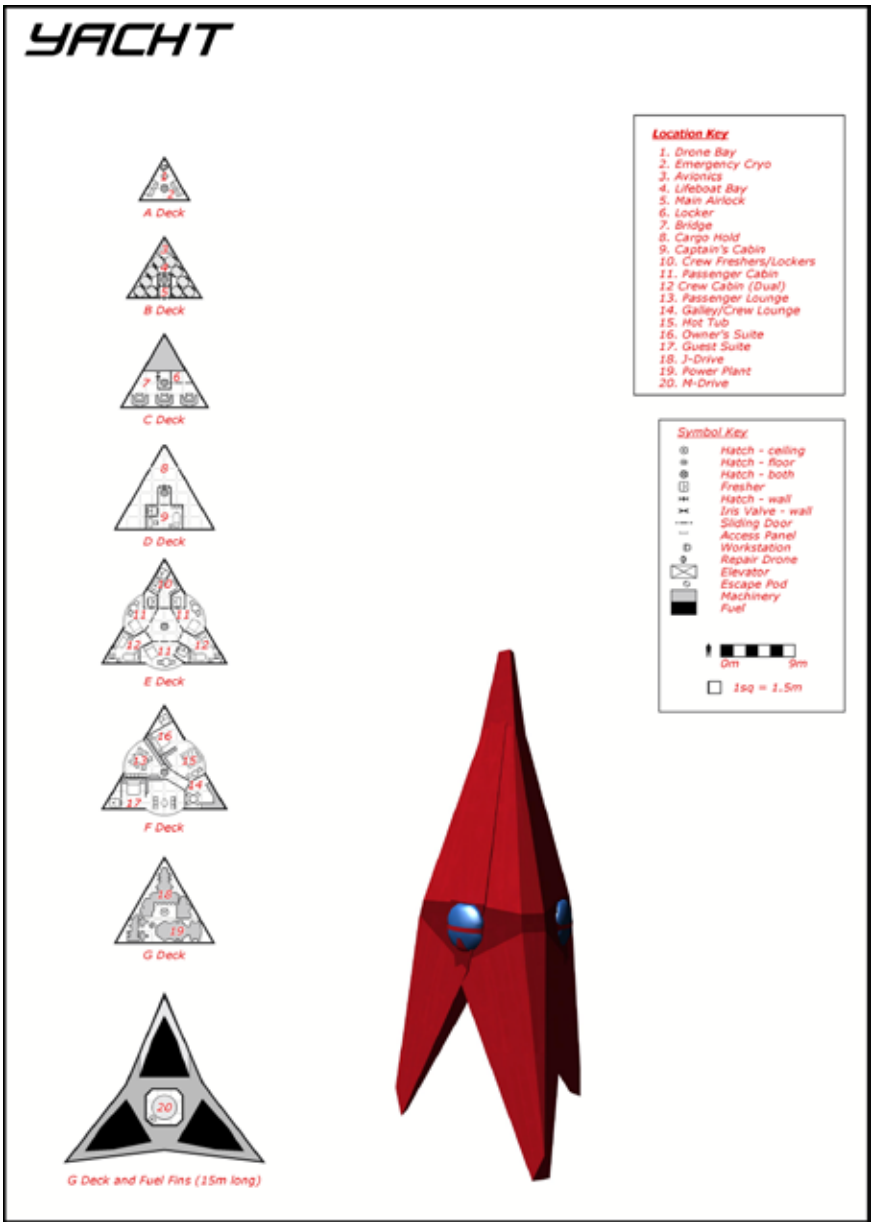
SUBSIDISED MERCHANT




Thermal Radiators
Aft Airlock
Cargo Hatch
Bridge Viewport
M-drive
Nose Airlock
Manoeuvring Fins
Fuel Pods


TRADER
A Deck
B Deck
C Deck
D Deck
E Deck
F Deck
G Deck
H deck
J Deck
Location Key
1. Nose Airlock
2. Avionics Bay
3. Cryobay
4. Escape Pod Bay
5. Ship's Locker
6. Bridge
7. Crew Cabin
8. Crew Commons
9. Passenger Cabin
10. Passenger Commons
11. Cargo Bay
12. Landing Gear and Fuel Purifiers
13. Power Plant
14. M-Drive
15. J-Drive
Symbol Key
Hatch - ceiling
Hatch - floor
Hatch - both
Fresher
Hatch - wall
Iris Valve - wall
Sliding Door
Access Panel
Workstation
Repair Drone
Elevator
Escape Pod
Machinery
Fuel
0m
9m
1sq = 1.5m


Nose Airlock
Viewports
M-Drive
Cargo Bay
Fuel Scoops


YACHT
A Deck
B Deck
C Deck
D Deck
E Deck
F Deck
G Deck
G Deck and Fuel Fins (15m long)
Location Key
1. Drone Bay
2. Emergency Cryo
3. Avionics
4. Lifeboat Bay
5. Main Airlock
6. Locker
7. Bridge
8. Cargo Hold
9. Captain's Cabin
10. Crew Freshers/Lockers
11. Passenger Cabin
12 Crew Cabin (Dual)
13. Passenger Lounge
14. Galley/Crew Lounge
15. Hot Tub
16. Owner's Suite
17. Guest Suite
18. J-Drive
19. Power Plant
20. M-Drive
Symbol Key
Hatch - ceiling
Hatch - floor
Hatch - both
Fresher
Hatch - wall
Iris Valve - wall
Sliding Door
Access Panel
Workstation
Repair Drone
Elevator
Escape Pod
Machinery
Fuel
0m
5m
1sq = 1.5m

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CEPHEUS DELUXE — CHARACTER CREATION WORKSHEET

PLAYER: _____

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STEP 1 - GENERATE CHARACTERISTICS

CHARACTERISTICS

SCORE		DM
	STR STRENGTH	
	DEX DEXTERITY	
	END ENDURANCE	
	INT INTELLIGENCE	
	EDU EDUCATION	
	SOC SOCIAL STANDING	

CHARACTERISTIC DMS

SCORE	DM
0-2	-2
3-5	-1
6-8	+0
9-11	+1
12-14	+3
15-17	+3
18-20	+4

LANGUAGES

STEP 2 - CHOOSE 1 HOMEWORLD SKILL

CHOOSE ONE SKILL FROM THE CHOICES AVAILABLE TO YOUR HOMEWORLD TYPE

HIGH-TECH CORE WORLD . . . . COMPUTER 1, GRAV VEHICLES 1, STREETWISE 1

WATER WORLD . . . . . WATERCRAFT 1, REPAIR 1, ATHLETICS 1

CAPITAL WORLD . . . . . CAROUSING 1, GRAV VEHICLE 1, LIAISON 1

FRONTIER COLONY . . . . . DRIVING 1, WATERCRAFT 1, SURVIVAL 1

INHOSPITABLE OUTPOST . . . . . REPAIR 1, SCIENCE 1, ZERO-G 1

PRIMITIVE BACKWATER . . . . . ANIMALS 1, RECON 1, SURVIVAL 1

STEP 3 - CAREERS

TERM 1 STARTING AGE: 18 RANK: 0 _____

CAREER: _____

CHOOSE 1 SERVICE SKILL AT LEVEL 1 • TAKE REMAINING SERVICE SKILLS AT LEVEL 0

PICK TWO SKILL LEVELS FROM ANY OF THE AVAILABLE SKILL TABLES FOR THE CAREER
[see page 20-21 for details and restrictions]

ROLL ON CAREER EVENT TABLE [ROLL:_____]

EVENT: _____

_____

_____ INCREASE AGE _____

TERM 2 STARTING AGE:_____ RANK: 0 _____

CAREER: _____

PICK TWO SKILL LEVELS FROM ANY OF THE AVAILABLE SKILL TABLES FOR THE CAREER
[see page 20-21 for details and restrictions]

RANK IMPROVES BY 1 _____

ROLL ON CAREER EVENT TABLE [ROLL:_____]

EVENT: _____

_____

_____ INCREASE AGE _____

TERM 3 STARTING AGE:_____ RANK: 1 _____

CAREER: _____

PICK TWO SKILL LEVELS FROM ANY OF THE AVAILABLE SKILL TABLES FOR THE CAREER
[see page 20-21 for details and restrictions]

ROLL ON CAREER EVENT TABLE [ROLL:_____]

EVENT: _____

_____

_____ INCREASE AGE _____

SKILL TRACKER

SKILL	RANKS
ADMIN	UNTRAINED 0 1 2 3 4 5
AIRCRAFT	UNTRAINED 0 1 2 3 4 5
ANIMALS	UNTRAINED 0 1 2 3 4 5
ATHLETICS	UNTRAINED 0 1 2 3 4 5
CAROUSING	UNTRAINED 0 1 2 3 4 5
COMPUTER	UNTRAINED 0 1 2 3 4 5
DECEPTION	UNTRAINED 0 1 2 3 4 5
DEMOLITIONS	UNTRAINED 0 1 2 3 4 5
DRIVING	UNTRAINED 0 1 2 3 4 5
ENGINEERING	UNTRAINED 0 1 2 3 4 5
GRAV VEHICLES	UNTRAINED 0 1 2 3 4 5
GUN COMBAT	UNTRAINED 0 1 2 3 4 5
GUNNERY	UNTRAINED 0 1 2 3 4 5
HEAVY WEAPONS	UNTRAINED 0 1 2 3 4 5
INVESTIGATION	UNTRAINED 0 1 2 3 4 5
JACK O' TRADES	UNTRAINED 0 1 2 3 4 5
LEADERSHIP	UNTRAINED 0 1 2 3 4 5
LIAISON	UNTRAINED 0 1 2 3 4 5
MEDICINE	UNTRAINED 0 1 2 3 4 5
MELEE COMBAT	UNTRAINED 0 1 2 3 4 5
PILOTING	UNTRAINED 0 1 2 3 4 5
RECON	UNTRAINED 0 1 2 3 4 5
REPAIR	UNTRAINED 0 1 2 3 4 5
SCIENCE	UNTRAINED 0 1 2 3 4 5
STEALTH	UNTRAINED 0 1 2 3 4 5
STEWARD	UNTRAINED 0 1 2 3 4 5
STREETWISE	UNTRAINED 0 1 2 3 4 5
SURVIVAL	UNTRAINED 0 1 2 3 4 5
TACTICS	UNTRAINED 0 1 2 3 4 5
WATERCRAFT	UNTRAINED 0 1 2 3 4 5
ZERO-G	UNTRAINED 0 1 2 3 4 5

Worksheet Designed by Anthony C. Hunter

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STEP 3 - CAREERS (CONTINUED)

TERM 4 STARTING AGE:_____ RANK: 1 _____
CAREER: _____

PICK ONE SKILL LEVEL FROM ANY OF THE AVAILABLE SKILL TABLES FOR THE CAREER
[see page 20-21 for details and restrictions]

RANK IMPROVES BY 1 _____

ROLL ON CAREER EVENT TABLE [ROLL:_____]
EVENT: _____
_____
_____ INCREASE AGE _____
ROLL FOR AGING EFFECTS [ROLL 2D-TERMS - SEE PAGE 37 FOR DETAILS]

TERM 5 STARTING AGE:_____ RANK: 2 _____
CAREER: _____

PICK ONE SKILL LEVEL FROM ANY OF THE AVAILABLE SKILL TABLES FOR THE CAREER
[see page 20-21 for details and restrictions]

ROLL ON CAREER EVENT TABLE [ROLL:_____]
EVENT: _____
_____
_____ INCREASE AGE _____
ROLL FOR AGING EFFECTS [ROLL 2D-TERMS - SEE PAGE 37 FOR DETAILS]_

TERM 6 STARTING AGE:_____ RANK: 2 _____
CAREER: _____

PICK ONE SKILL LEVEL FROM ANY OF THE AVAILABLE SKILL TABLES FOR THE CAREER
[see page 20-21 for details and restrictions]

RANK IMPROVES BY 1 _____

ROLL ON CAREER EVENT TABLE [ROLL:_____]
EVENT: _____
_____
_____ INCREASE AGE _____
ROLL FOR AGING EFFECTS [ROLL 2D-TERMS - SEE PAGE 37 FOR DETAILS]

TERM 7 STARTING AGE:_____ RANK: 3 _____
CAREER: _____

PICK ONE SKILL LEVEL FROM ANY OF THE AVAILABLE SKILL TABLES FOR THE CAREER
[see page 20-21 for details and restrictions]

ROLL ON CAREER EVENT TABLE [ROLL:_____]
EVENT: _____
_____
_____ INCREASE AGE _____
ROLL FOR AGING EFFECTS [ROLL 2D-TERMS - SEE PAGE 37 FOR DETAILS]_

MUSTERING OUT BENEFITS

PAGE 20-21 FOR DETAILS • PAGE 36 HAS BENEFIT DESCRIPTIONS

RETIREMENT PAY

FIVE TERMS OR MORE = RETIREMENT PAY
SEE PAGE 36

SELECT TRAITS

ONE FOR EVERY TWO TERMS • TRAITS BEGIN ON PAGE 41

STEP 4 - CALCULATE STAMINA AND LIFEBLOOD

SEE PAGE 39 FOR DETAILS.
STAMINA = END CHARACTERISTIC + ATHLETICS SKILL
LIFEBLOOD = 2 TIMES END CHARACTERISTIC + ATHLETICS SKILL

STEP 5 - FINALIZE YOUR CHARACTER

SEE PAGE 39 FOR DETAILS.

CHARACTER NAME: _____

COPY ALL THE INFORMATION TO YOUR CHARACTER RECORD

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NAME	HOMEWORLD/TL	AGE

LANGUAGES

HERO POINTS

SPENT

EXPERIENCE POINTS

UNSPENT | TOTAL EARNED

CHARACTERISTICS

	SCORE	DM
STR STRENGTH		
DEX DEXTERITY		
END ENDURANCE		
INT INTELLIGENCE		
EDU EDUCATION		
SOC SOCIAL STANDING		

DAMAGE TRACK AND CONDITIONS

MAX | CURRENT

STAMINA

LIFEBLOOD

[ ] FATIGUED — DM -2 ALL THROWS; 8 HOURS REST REMOVES

LIVING EXPENSES MONTHLY | DAILY

CREDITS AT HAND | BANKED | PENSION

PERSONAL ARMOR

	AP	TL	ENC	SKILL REQUIREMENT(S)

CAREERS

	TERMS	RANK

TRAITS

MELEE ATTACKS

WEAPON	TL	DAMAGE	ASPECTS
UNARMED	-----	STR DM	

RANGED ATTACKS

WEAPON	TL	RANGE	DAMAGE	MAG	ASPECTS

NOTABLE SKILLS

RANK	SKILL	RANK	SKILL

CARRIED GEAR

CEPHEUS DELUXE
CHARACTER RECORD

PLAYER_____

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Character Record Designed by Anthony C. Hunter

SHIP NAME	PORT OF REGISTRY	HULL TONNAGE	HULL CONFIGURATION

SHIP ARMOR LIGHT [ ] HEAVY [ ] TECH LEVEL _____

ARMOR TYPE _____ TL _____ TONNAGE _____

STEALTH YES [ ] NO [ ] [DM-4 TO DETECT OR LOCK ONTO SHIP]

DRIVES TECH LEVEL [ ] JUMP RATING [ ]

PERFORMANCE RATINGS

[ ] POWER PLANT • [ ] MANEUVER DRIVE • [ ] JUMP DRIVE

FUEL CAPACITY:

BRIDGE / COCKPIT

CONTROLS / SIZE

ELECTRONICS RATING: _____

TECH LEVEL [ ] TONNAGE [ ] MAX JUMP [ ]

SENSOR DM [ ]

ADVANCED [ ] (+1 JUMP RATING +15% COST)

SHIELDS

TL	TYPE	EFFECT	TONS

ARMAMENT

WEAPON	TL	TONS	TYPE	HITS	NOTES

OTHER COMPONENTS

ACCOMODATIONS

CREW COMPLIMENT

CARRIED VEHICLES

SHIP QUIRKS / NOTES

CARGO MANIFEST

MAXINUM CARGO TONNAGE

FINAL COST: _____

MORTGAGE / PAYMENTS: _____

CEPHEUS DELUXE
SHIP RECORD

PLAYER: _____

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Ship Record Designed by Anthony C. Hunter

PLANET DESIGNATION	LOCATION	UWP

STARPORT TYPE: _____

FACILITIES/SPECIAL SERVICES: _____

FUEL / REPAIR COSTS: _____

WORLD SIZE: _____

ATMOSPHERE: _____

ATMOSPHERIC PRESSURE: _____

ATMOSPHERE NOTES: _____

HYDROGRAPHICS: _____

HYDROSPHERE CONTENT: _____

POPULATION: _____

POPULATION MAKEUP: _____

LANGUAGES: _____

GOVERNMENT: _____

PRIMARY GOVERNMENT TYPE: _____

GOVERNMENT STABILITY / FACTIONS

LAW LEVEL: _____

SPECIFIC RESTRICTIONS / ALLOWANCES

TECH LEVEL: _____

TECHNOLOGICAL ANOMOLIES / BREAKTHROUGHS

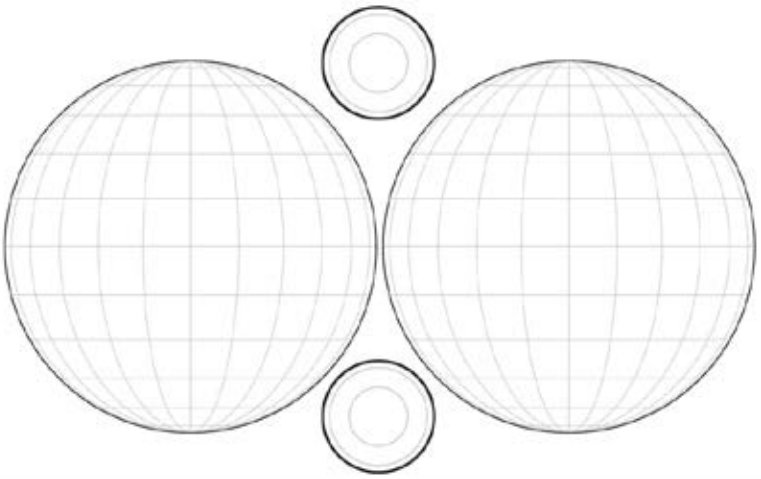
COMMERCE

COMMON EXPORTS: _____

PREFERRED IMPORTS: _____

PROSCRIBED IMPORTS/EXPORTS:

CUSTOMS FEES / TAXES: _____



NOTABLE LOCATIONS / INDIVIDUALS / LIFEFORMS

CEPHEUS DELUXE
PLANETARY RECORD

PLAYER: _____

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Planetary Record Designed by Bethany C. Hunter

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